

Policy 3.1: Promote alternatives to single-occupancy vehicle travel, particularly for commute trips.

Programs:

1. Seek funding for programs that promote transit, ridesharing, bicycling and walking.
2. Support efforts to improve shuttle service to downtown and major shopping and employment centers.

Policy 3.2: Encourage expansion of public transit as needed to meet the changing needs of the area for local and regional access, including fixed route and demand response where appropriate.

Programs:

1. Work with Central Coast Area Transit and SLORTA to encourage use of local and regional public transit.
2. Provide fixed routed transit with bus shelters along El Camino Real.
3. Support and encourage the use and expansion of Park & Ride facilities.

Policy 3.3: Comply with the Transportation Demand Management program requirements of the San Luis Obispo County Clean Air Plan to reduce peak period trip generation.

Program:

1. Support programs to encourage employers to promote transit use, such as flexible work schedules.

IV. Safety & Noise Element

A. Safety Element Goals and Policies

The City participated in the 2000 update of the County General Plan Safety Element. Information about safety in Atascadero appears in the Technical Background Report for that update. The goals and policies below, which address issues detailed in the Background Report, are generally adapted from the County Safety Element. However, a number of the policies are unique to Atascadero.

1. Emergency preparedness

Emergency preparedness is necessary to avoid or minimize the loss of life and property due to natural and technological disasters; to reduce the social, cultural, environmental, and economic costs of disasters; and to assist and encourage rapid recovery from catastrophic events. An important part of preparedness is careful assessment of risks before an emergency occurs. Response activities focus on saving lives, preventing injury, and reducing property damage.

Critical facilities, which provide emergency assistance after a major disaster, include police and fire stations, schools, hospitals, and roadways designated as evacuation routes.

Goal SFN 1. Attain a High Level of Emergency Preparedness

Policy 1.1: Support response programs that provide emergency and other services to the public when a disaster occurs.

Programs:

1. Provide required training to ensure the readiness of response teams.
2. Follow statewide Standardized Emergency Management System procedures.
3. Reduce the time and effort required to obtain permits for emergency repair work, including coordinating with State and Federal agencies prior to any event.
4. Maintain and upgrade critical facilities.
5. Adopt and maintain a Local Hazard Mitigation Plan (LHMP) consistent with the Disaster Mitigation Act of 2000 (DMA 2000).

Policy 1.2: Help prepare and organize residents to respond appropriately to disasters.

Programs:

1. Support education in the schools that teaches children how to avoid dangers and behave during an emergency.
2. Support the efforts of many organizations – government, radio, newspapers and TV stations, utilities, emergency response providers, the Office of Emergency Services, and our health community – that provide outreach and education to the community.
3. Support the efforts and education of people with disabilities to respond appropriately to emergencies.
4. Develop an emergency evacuation program for the neighborhoods in the west hills that are subject to high fire hazards.
5. Coordinate circulation element street designations and road improvement projects with evacuation routes.
6. Support disaster education and preparedness programs geared towards residents through programs such as Community Emergency Response Team (CERT) or other community based efforts.

Policy 1.3: Coordinate with County and State agencies, news media, and others working to reduce the risks of disasters through effective preparedness, response and recovery.

Program:

1. Establish a Point of Information (PIO) to meet with agency and media representatives.

Policy 1.4: Expand and update the database of safety related information, including Geographic Information System (GIS) data, and convey that information to the public and decision makers.

Programs:

1. Maintain an updated City GIS hazard map with information on fire hazard areas, native plant fuel loads, flood zones, un-reinforced masonry buildings, underground storage tanks, landslide areas, earthquake faults, pipelines, high voltage electrical transmission lines, railroads, state highways, underground storage tanks, and evacuation routes.
2. Seek from other government, academic and private organizations new data that can be used for emergency preparedness and response.
3. Share hazard information with nearby jurisdictions, private and public organizations, and the general public.

Policy 1.5: Perform assessments aimed at reducing or eliminating long-term risks to improve the efficiency and decrease the cost of disaster response and recovery.

Programs:

1. Provide ongoing emergency preparedness training for all City staff.
2. Ensure the building code and other City regulations applicable to structural safety are updated current with State Law.

Policy 1.6: Facilitate long-term recovery following a disaster.

Programs:

1. Assist with public and private rebuilding efforts, provision of housing for displaced residents, and resumption of service, business and government functions.
2. Provide assistance to agencies and organizations involved in disaster recovery.
3. Identify agencies needed to participate in assessing damage, providing citizens with care and shelter, and repairing critical infrastructure.
4. Ensure duplicate storage of essential City records.

2. Flooding and Dam Inundation

Flooding and its effects generally occur when heavy rainfall causes watercourses to overtop their banks. Winter storms bring large amounts of runoff to areas not accustomed to high flows, including areas damaged by fire. Runoff can carry debris and sediment that can clog drainage systems and block creek channels. Flooding may also occur in low-lying areas with poor

drainage, even during moderately sized storms. Flooding can harm structures, infrastructure and crops, and can create health hazards by rupturing sewer lines and damaging septic systems.

Many factors contribute to the severity of floods, including fires in watershed areas, structures and fill in flood-prone areas, and increased runoff from impervious surfaces such as roadways and rooftops. The primary measure used to delineate areas subject to flooding is the "100-year flood".

Dam failure can result from a number of causes. Earthquakes, fast-rising flood waters, and structural flaws can contribute to dam breach and release of impounded water. Flooding also can occur when landslides displace large volumes of reservoir water. Dam failure can cause flooding, erosion, and debris and sediment deposition.

Sudden failure of the Salinas Dam at Santa Margarita Lake could inundate an area in the City within about 1,000 feet of the Salinas River. Failure of the Atascadero Lake Dam with the lake at capacity could produce flooding about two feet deep in the Morro Flats/Tecorida area and affect about 100 residents. The State conducts periodic reviews to evaluate dam safety.

Goal SFN 2. Reduce damage to structures and danger to life caused by flooding and dam inundation.

Policy 2.1: Enforce federal regulations regarding placement of structures in floodplains, and maintain appropriate standards for development in flood-prone and poorly drained areas (refer to Figure II-8).

Programs:

1. Require an engineered floodplain and hydrologic analysis to be prepared for new development project within or directly adjacent to known 100-year flood plains.
2. Prohibit development within floodways and areas of high flood hazard potential to the extent practicable.
3. Required the lowest finished floor of new construction in low-lying or other areas with serious drainage or flooding potential to be contracted a minimum of 1-foot above the 100-year water surface elevation.
4. Prohibit development that will create new upstream or downstream flooding or drainage problems.

Policy 2.2: Reduce flood damage in areas known to be prone to flooding.

Programs:

1. Augment existing GIS and other data regarding low-lying areas with information obtained during storms.
2. Develop a prioritized list of proposed capital improvement projects for low-lying, flood-prone areas, and seek funding for those projects.

3. Perform flood-related preventive maintenance and repair, and ensure that all flood-related work in riparian areas minimizes impacts to biological resources.

Policy 2.3: Prepare the City to respond to flood emergencies.

Program:

1. Train City personnel to a level appropriate to their positions and responsibilities to respond to flood emergencies.
2. Require new subdivisions to construct a system of all weather emergency access connections consistent with the City's Emergency Evacuation Plan.
3. Identify and map appropriate evacuation routes for neighborhoods along the Salinas River.

Policy 2.4: Minimize the risk of dam failure.

Programs:

1. Work with State and Federal agencies to assist with inspection and maintenance of the Salinas and Atascadero Lake Dams.
2. Maintain a dam failure evacuation plan to guide public officials that includes use of the emergency alert system to notify the public.

Figure IV-1: Flood Plain Map

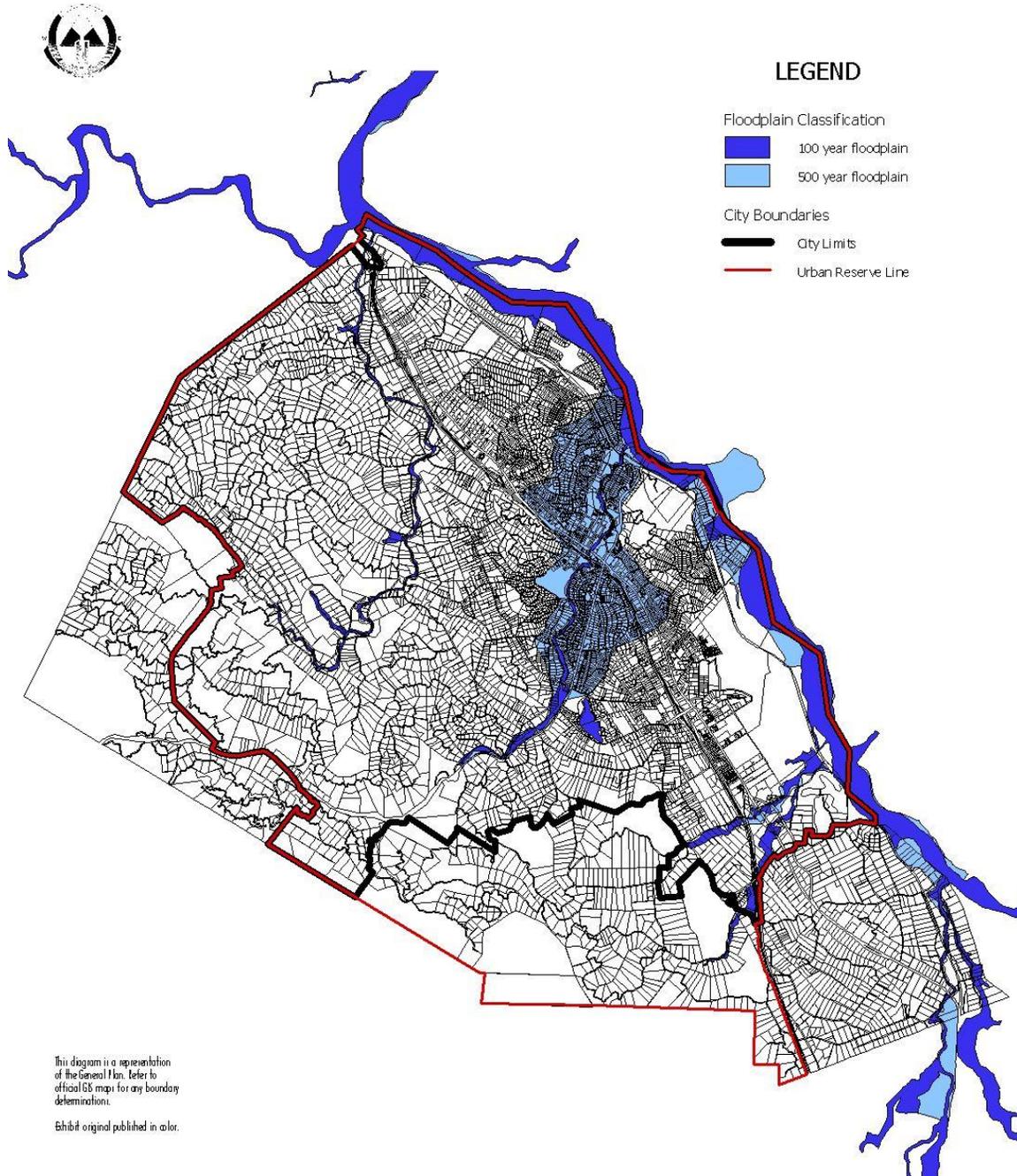
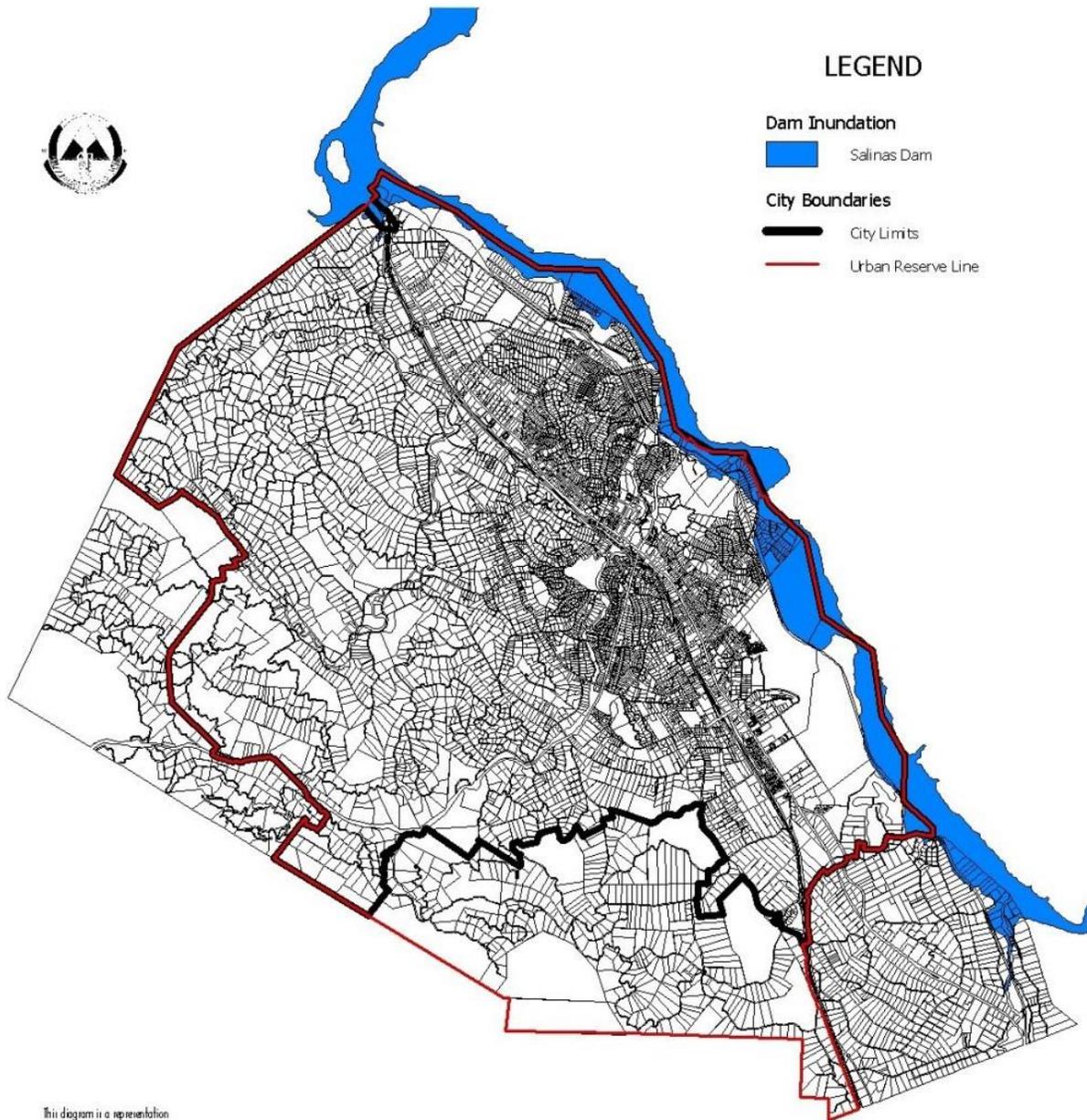


Figure IV-2: Dam Failure Inundation Map



This diagram is a representation of the General Plan. Refer to official GIS maps for any boundary determinations.

Exhibit original published in color.

3. Wildland Fires

Fires are an important component of the local ecosystem. Wildlands must burn or otherwise be controlled periodically to maintain ecological viability. Fuel maintenance (controlled burns, mowing, cattle grazing, fire goats and other means) has replaced uncontrolled wildfire because of threats to human habitation, and development in inappropriate locations often requires fuel modification that results in environmental damage.

Fires can cause significant life, property and environmental loss. Fire hazards can be influenced by a variety of factors, including building location and construction, access, storage of flammable and hazardous materials, inadequate water supply, and response time for fire suppression personnel.

Wildfire and urban fire hazards are closely related in Atascadero due to extensive residential development in hillside areas with flammable chaparral, grassland and oak woodland (especially where vegetation has not burned recently). Chaparral vegetation burns intensely at extremely high temperatures, making fires in this habitat difficult to extinguish.

Northwest afternoon winds common in the western part of the City (associated with inland valley heating and cooler air currents flowing from the ocean) can cause fires to spread and shift direction quickly and unpredictably. Steep slopes also are subject to rapid flame spread and often have poor access for fire suppression equipment. The Fire Department Master Plan identifies areas of the City at higher risk for wildfires.

Goal SFN 3. Reduce the threat to life, structures, and the environment caused by fire.

Policy 3.1: Carefully site and configure new development in higher fire risk areas

Programs:

1. Encourage the clustering of lots and buildings in higher fire hazard areas to reduce the need for multiple response teams during fires.
2. Require Fire Department and Atascadero Mutual Water Company review of subdivision design to ensure adequate fire flows and access for emergency vehicles, and compliance of structures with Fire and Building Codes.
3. Require fire resistant material in building construction in fire hazard areas.
4. Require defensible space around all structures, especially in higher fire hazard areas.

Policy 3.2: Plan for adequate facilities, equipment, and personnel to meet fire fighting demands.

Programs:

1. Update the Fire Department Master Plan every five years.
2. Continue to plan for future facility, equipment, communication system, and personnel requirements.
3. Coordinate with the County to obtain information generated during the update of the Salinas River Area Plan relevant to improving fire suppression capabilities.

Policy 3.3.: Sustain the ability of the Fire Department to respond to emergencies.

Programs:

1. Prepare, adopt, and maintain standards of coverage for the Fire Department specific to the geography of Atascadero.
2. Maintain mutual aid agreements with other fire and emergency service agencies in rural areas of the community
3. Train Fire Department personnel in wildfire risk assessment.
4. Maintain a fire-related GIS database to assist decision-makers with analyzing development proposals, and update the database when new CDF/County Fire Department fire hazard severity maps become available.
5. Develop GIS based fuel load mapping in conjunction with the native tree mapping program.
6. Provide ongoing fire prevention public education programs.
7. Develop and codify uniform standards for maximum slope of streets, driveways, and fire access roads for all new development.
8. Continue to cooperate with the Atascadero Mutual Water Company to improve and expand fire flows and hydrant locations.

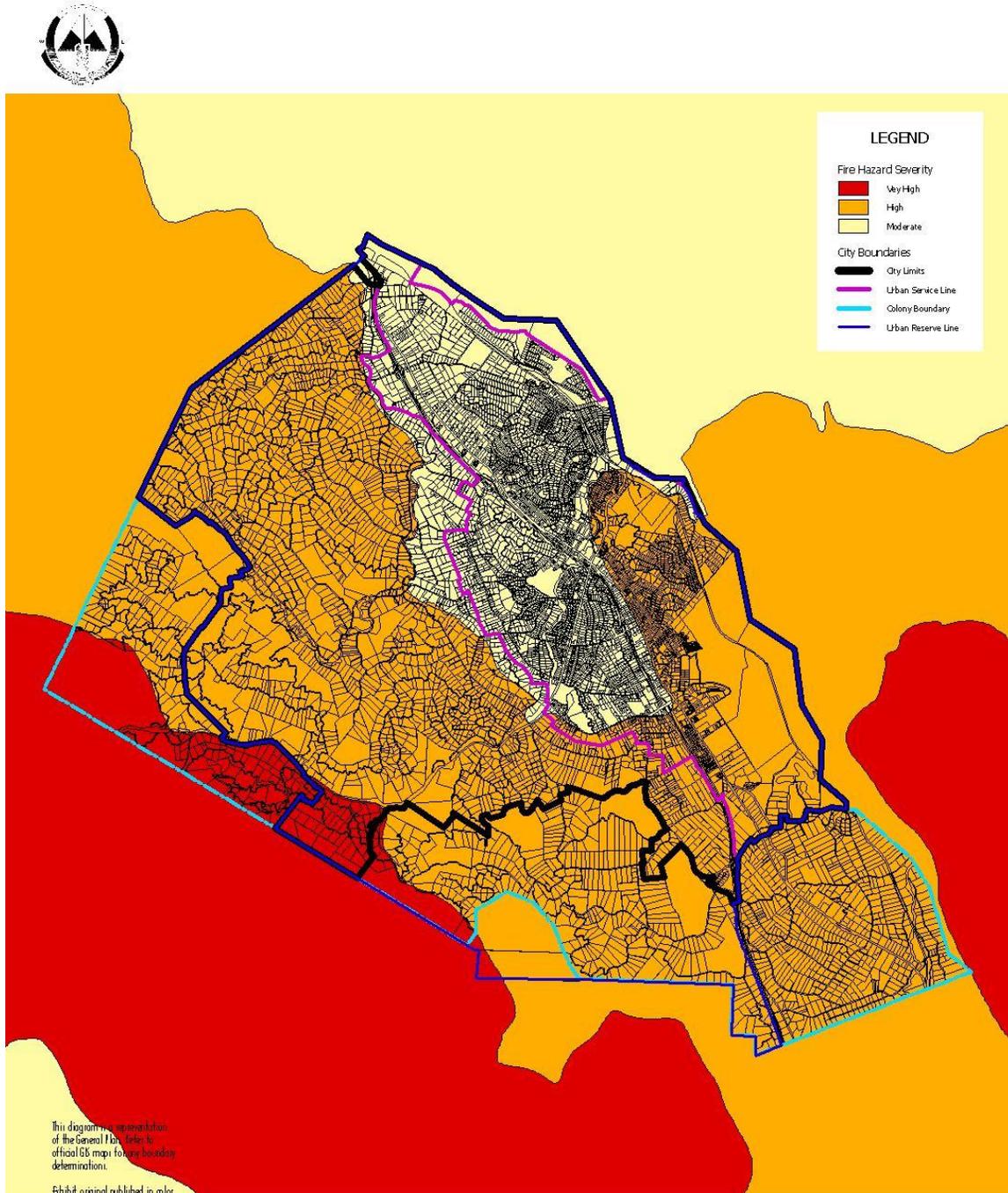
Policy 3.4: Adopt programs to reduce the impacts of fires.

Programs:

1. Develop regulations that balance the need for defensible area around homes with the preservation of Native Trees and habitats.
2. Inform homeowners of fire dangers, appropriate responses to fire, and ways to prevent loss.
3. Continue to promote the efforts of the Fire Safe Council.
4. Train fire fighters to educate property owners and the public.
5. Require Fire Department review of development plans to assure adequacy of access for equipment, water supplies, construction standards, and vegetation clearance.

6. Ensure that sufficient water supplies are available for protection of structures and encourage built-in fire protection systems such as sprinklers.
7. Require the installation of residential fire sprinklers on new construction throughout the City.
8. Amend to Municipal code to require the installation of fire sprinkler systems of all commercial and industrial buildings regardless of size.
9. Support the Memorandum of Understanding between the Atascadero City Fire Department and the Air Pollution Control District that allows burning within the Urban Reserve Line of Atascadero where a fire hazard is present and the vegetation can not be abated by any other means or other alternatives.

Figure IV-3: Wildland Fire Hazard Map



4. Geologic and Seismic Hazards

Geologic conditions define the stability of the ground and how a site will respond to natural forces such as erosion and earthquakes. The frequency and strength of earthquakes depend on the activity, number, and type of faults that pass through or influence a particular region.

Mapped lateral faults in the vicinity of Atascadero include the potentially active Rinconada fault and the Nacimiento fault zone. The Rinconada fault (and associated Jolon fault) is mapped east of the Salinas River trending northwest. The six-mile-wide Nacimiento fault zone (trending northwest in the Santa Lucia Range southwest of the City) is classified as inactive but appears to coincide with an historic earthquake epicenter. A subsurface thrust fault (Black Mountain) lies three (3) miles east of the City. Additional potential seismic hazards that are in proximity to the City are shown in Table IV-1.

Seismic (earthquake-related) hazards can result in significant public safety risks and property damage. Direct effects of earthquakes include fault rupture and groundshaking. Associated processes include liquefaction, seismic settlement, and landsliding. (Other earthquake-related hazards, such as dam inundation, fires, and unsafe structures are evaluated in separate sections of this Safety Element.)

Fault rupture (displacement of the ground surface along a fault trace) typically occurs during earthquakes of magnitude 5 or greater in a linear zone around previous ruptures, and as sympathetic movement on adjacent or intersecting faults. The potentially active Rinconada Fault presents a moderate fault rupture hazard to the City.

Groundshaking is motion that occurs in response to local and regional earthquakes. Table 1 lists nearby faults considered to be potential sources of relatively strong groundshaking, which development projects must consider in order to comply with standard practices regarding seismic safety. California Building Code requirements (CBC; adopted as Municipal Code Title 8) establish design and construction standards intended to enable structures to withstand groundshaking.

Table IV-1: Potential Groundshaking Sources

Fault	Distance* (miles)	Maximum Earthquake	Maximum Probable Earthquake	Anticipated Acceleration Range (g)
Rinconada and Jolon	2	7.5	7.0	0.4-0.6
Black Mountain	3	7.5	5.75	0.1-0.5
La Panza	9	7.5	Unknown, but assumes 5	0.1-0.4
Los Osos	14	7	Unknown, but assumes 5	0.1-0.2
Hosgri	22	7.5	6.5-7.5	0.1-0.2
San Andreas	27	8.25	8	0.1-0.2
San Simeon	35	unknown	6.5	unknown

• *from El Camino Real/Traffic Way

Liquefaction is the sudden loss of soil strength due to rapid increase in pore water pressure during groundshaking, while seismic settlement is the reduction of soil volume (which may occur simultaneously or independent of liquefaction). Liquefaction potential increases with earthquake magnitude and groundshaking duration. Low-lying areas adjacent to Atascadero and Graves Creeks, and the Salinas River underlain by unconsolidated alluvial soil, are mapped as having high liquefaction potential. Much of the City is underlain by older alluvium, considered to possess moderate liquefaction potential.

The CBC requires the assessment of liquefaction potential in the design of all structures. If buildings can't be located away from potentially liquefiable soils, the hazard typically can be mitigated by constructing deep foundations, compacting granular soils, and/or employing engineering techniques during construction.

Landslides and slope instability can result from rainfall and runoff, weak soils, grading, inadequate drainage, steep slopes, adverse geologic structure, and/or earthquake activity. Slope instability can occur in the form of creep, slumping, large progressive translation or rotational failure, rockfall, debris flow, or erosion. Slope instability potential in the City generally increases with steepness and distance from the Salinas River. Some steeper areas are mapped as having very high slope failure potential.

Landslides can result in damage to property and cause buildings to become unsafe due to distress or collapse during sudden or gradual slope movement. Even structures on stable ground may be exposed to hazards if they lie in the path of slope activity.

The CBC requires site-specific slope stability studies for hillside development. Any grading on slopes 10 percent or steeper also is subject to CEQA environmental review. Hillside developments often require nonstandard, heavily engineered designs. Building in a landslide

hazard area means a property owner must accept a relatively high degree of risk. (Future occupants or owners are not represented when cost or risk-management decisions are made that facilitate site development.)

Goal SFN 4. Minimize the potential for loss of life and property resulting from geologic and seismic hazards.

Policy 4.1: Ensure that developments, structures, and public facilities adequately address geologic and seismic hazards.

Programs:

1. Disseminate information to the public to improve awareness of geologic hazards and seismic safety.
2. Continually update information about faults and geologic hazards (including GIS data and geologic and fault mapping), and encourage the California Division of Mines and Geology to provide new and updated geologic hazard data for inclusion in the database.
3. Conduct studies to assess seismic activity within the Nacimiento fault zone in the southwestern part of the City and SOI prior to approving construction of new structures in the mapped fault traces.
4. When projects are proposed in geologically hazardous areas, require development applicants to submit reports, technical documents, and plans reviewed by a State-licensed independent geologist or geotechnical engineer, and that include that expert's opinion as to whether documents were prepared in accordance with standard practices, applicable codes, and regulations pertaining to geologic hazards.

Policy 4.2: Ensure that structures are designed and located to withstand strong groundshaking, liquefaction, and seismic settlement.

Programs:

1. Enforce adopted Building Code provisions pertaining to grading and construction relative to seismic hazards.
2. Update the Title 8 of the Municipal Code as necessary to promote seismic safety in structural designs.
3. Enforce building code requirements for addressing liquefaction potential in the design of structures.
4. Require geotechnical studies for development in areas with moderate to high liquefaction potential that include analysis of seismic settlement potential and specify appropriate mitigation.

Policy 4.3: Avoid development in areas at risk for slope failure when possible, and ensure that hillside developments employ appropriate design and construction techniques.

Programs:

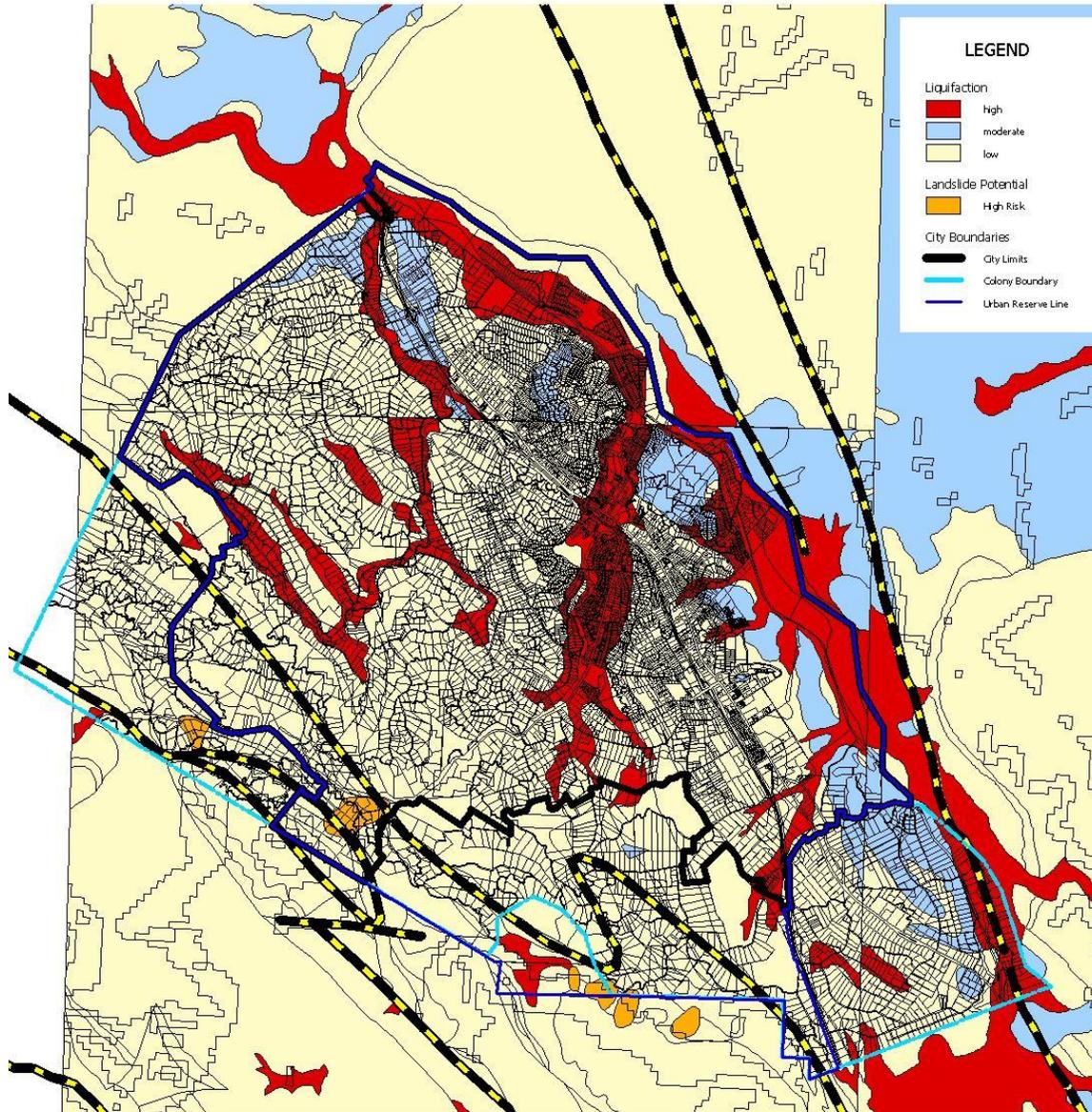
1. Continue to require slope stability assessments by appropriate registered professionals for developments in areas of known slope instability, landslides, or slopes steeper than 10 percent.
2. Require slope stability studies for subdivisions prior to delineating lot lines and building envelopes.
3. Prohibit new development in areas of high risk landslide activity, unless plans demonstrate prior to development that the hazard can be reduced to a less than significant level.
4. Prohibit expansion of existing structures or developments in areas of high risk landslide activity, except when it will reduce the potential for loss of life and property.
5. Require development proposals to mitigate landslide and slope stability impacts on neighboring property, structures, and infrastructure.
6. Enforce building code provisions and other applicable ordinances regulating development on sloping ground.

Policy 4.4.: Improve the ability of City personnel and residents to respond to seismic emergencies.

Program:

1. Train City personnel to a level appropriate to their position and responsibilities to adequately and safely respond to seismic emergencies.
2. Encourage residents to participate in Community Emergency Response Team (CERT) training or other types of programs to improve community wide response to seismic emergencies.

Figure IV-4: Fault Line and Geohazard Map



This diagram is a representation of the General Plan. Refer to official GIS maps for any boundary determinations.

GIS data provided as published by the City.

5. Hazardous Materials, Radiation, Electromagnetic Fields, Unsafe Trees and Structures

Transport along Highway 101 and the Union Pacific Railroad poses the most significant hazardous material risk in Atascadero. A hazardous material release from the highway or railroad could expose residents to significant health and safety hazards and cause substantial environmental damage.

Hazardous material use by City businesses is limited and not concentrated in any specific area. Commercial hazardous material use and storage occurs at industrial operations, manufacturing businesses (such as cabinet shops), and a propane distribution terminal.

Transportation, storage, and use of pesticides in agricultural and commercial settings also pose potential hazards to the public. Pesticides are regulated by the County Agricultural Commissioner's Office.

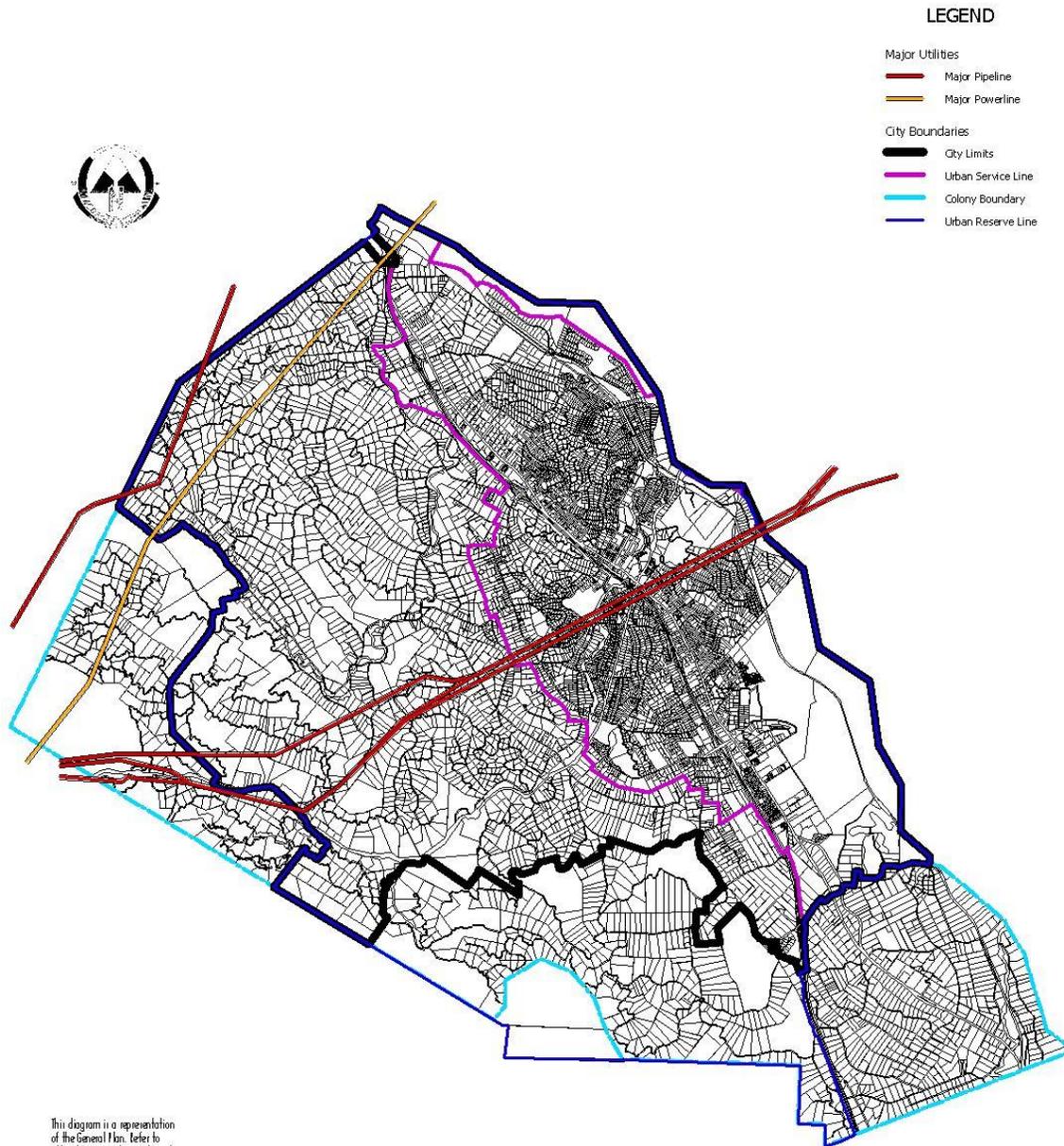
Chevron USA, Inc. and US Navy

Chevron and the US Navy oil pipelines extend from Estero Bay through Atascadero easterly to the San Joaquin Valley. The Chevron pipeline transports crude oil; use of the Navy pipeline has been abandoned. The two pipelines follow the same route through Atascadero, extending east-west from the Paradise Valley north of Route 41, crossing US 101 just north of Morro Road and then continuing easterly across Pine Mountain to the Salinas River. East of the Salinas River, the pipelines continue northeasterly through the El Pomar area to Shandon, generally paralleling Route 41. The nearest pumping station to Atascadero is several miles east of the Salinas River. The California Public Utilities Commission administers Federal regulations for the pipelines. There are no known plans for constructing new oil pipelines within the Atascadero area.

Southern California Gas Company

Southern California Gas Company (SCGC) natural gas lines extend north-south and east-west from Atascadero. The north-south line follows El Camino Real and US 101, connecting southerly to San Luis Obispo and Santa Maria, and northerly to Paso Robles and beyond. The east-west line generally follows Route 41 east to Shandon. Natural gas is generally available throughout Atascadero through a local distribution system. The California Public Utilities Commission administers Federal regulations for the pipelines. There are no active plans for construction of new natural gas transmission lines (SLOCOG, 1992).

Figure IV-5: Major Powerline and Pipelines



LEGEND

- Major Utilities
- Major Pipeline
 - Major Powerline
- City Boundaries
- City Limits
 - Urban Service Line
 - Colony Boundary
 - Urban Reserve Line

This diagram is a representation of the General Plan. Refer to official GP maps for any boundary determination.

Exhibit original published in color.

Pacific Gas & Electric

Pacific Gas & Electric (PG&E) has a 70 KV electrical transmission line that extends north-south from San Luis Obispo through Atascadero and on to Paso Robles and beyond. A substation is located near Atascadero Lake. Two transmission lines also branch out from the substation westerly to Cayucos and to Harmony. Electricity is generally available throughout Atascadero through a local distribution system of mostly overhead wires (See Public Utilities section of the Land Use Element).

The PG&E Diablo Canyon Power Plant is the primary radiation risk in the region. Extensive warning, reporting, and response plans have been developed to prepare for potential emergency situations at the plant. Updated information regarding the Emergency Response Plan is distributed to the public each year.

Accumulations of radon (a naturally occurring gas produced by the breakdown of uranium in soil, rock, and water) inside structures can pose a significant health hazard because radon is known to cause lung cancer. The threat of radon is very low in well-ventilated structures; basements (rare in the City) are common problem areas.

Any tree, especially one already damaged by disease, may pose a hazard if it (or one or more limbs) falls, which commonly happens during storms. Hazardous trees near residential dwellings should be removed consistent with the Tree Ordinance.

Any building may be damaged during an earthquake, but some construction materials generally perform better than others do. Modern structures with wooden and steel framing or reinforced concrete generally withstand groundshaking with little threat of failure or major damage. Conversely, buildings made of unreinforced masonry typically provide little earthquake resistance. The City has required 20 buildings to be demolished or retrofitted to meet earthquake resistance standards.

Goal SFN 5. Reduce the potential for harm to individuals and damage to the environment from hazardous materials, radiation, electromagnetic fields, radon, and unsafe trees and structures.

Policy 5.1: Reduce the potential for exposure to humans and the environment from hazardous substances.

Programs:

1. Require businesses that use, store, or transport hazardous materials to ensure that adequate measures are taken to protect public health and safety.
2. Work with Caltrans to require all transport of hazardous materials to follow approved routes.

3. Work with Union Pacific to ensure adequate precaution and preparedness regarding rail transport of hazardous materials.
4. Coordinate with AMWC to protect well fields from hazardous materials.

Policy 5.2: Reduce the potential for pesticide exposure to humans and the environment.

Programs:

1. Ensure that emergency first responders and dispatch operators know to contact the County Agricultural Commissioner's Office for technical assistance in the event of a pesticide-related emergency.
2. Work with pesticide applicators (including commercial users and homeowners) to ensure necessary measures are taken to protect public health and safety.
3. Provide information and technical guidance to encourage implementation of Integrated Pest Management strategies.

Policy 5.3: Minimize potential hazards and spills from oil and gas pipelines and underground storage tanks.

Program:

1. Work with pipeline owners and operators and appropriate County and State agencies to develop adequate prevention and cleanup strategies.
2. Work with property owners, AMWC and County Environmental Health to abate Leaking underground storage tanks and monitor existing tanks for leakage.

Policy 5.4: Support County efforts to maintain a high level of radiation emergency preparedness and ensure that the public receives necessary information about the Diablo Canyon Power Plant.

Program:

1. Coordinate with County and PG&E to review and update information about emergency preparedness and evacuations.

Policy 5.5: Address unreinforced masonry buildings consistent with State Law.

Program:

1. Continue to require reinforcement necessary to meet adopted structural standards of buildings identified pursuant to State law.
2. Work with property owners and the redevelopment agency to develop programs to reinforce and preserve historic masonry structures within the downtown district.
3. Utilize GIS to map the location of all unreinforced masonry buildings in the City.

B. Noise Element

The City of Atascadero Noise Element of the General Plan provides a policy framework for addressing potential noise impacts in the planning process. Its purpose is to minimize future noise conflicts. The Noise Element consists of a Policy Document, Technical Reference Document, and Acoustical Design Manual. The Policy Document includes maps showing the extent of noise exposure from the major noise sources in the City (roadways and railways) along with the goals, policies, and implementation programs adopted by the City to reduce future noise impacts. Among the most significant polices of the Noise Element are numerical noise standards that limit noise exposure within noise-sensitive land uses, and performance standards for new commercial and industrial uses that might adversely impact noise-sensitive land uses.

When the potential for adverse noise impacts is identified, mitigation is required to carry out the specific recommendations of an expert in acoustics or, under some circumstances, by implementing standard noise mitigation packages. When mitigation is required, highest priority is given to avoiding or reducing noise impacts through site planning and project design, and lowest priority given to structural mitigation measures such as construction of sound walls and acoustical treatment of buildings.

The Technical Reference Document contains background information on the data and methods used to prepare noise exposure information and an inventory of the major noise sources in the City. Information about the measurement and effects of noise is also included in the document. The Technical Reference Document is intended to be a resource when evaluating the noise-related implications of a project.

The purpose of the Acoustical Design Manual is to provide City staff, developers, builders, and homeowners with a guide for reducing outdoor and indoor noise in relatively simple situations. The Manual contains standard noise mitigation packages which in some situations may be used in lieu of an acoustical analysis prepared by a professional.

1. Introduction

Purpose and Scope

The Noise Element of the General Plan is a planning document which provides a policy framework within which potential noise impacts may be addressed during project review and long range planning. This element has been adopted by Atascadero in conformance with Section 65302 (f) of the California Government Code. The Noise Element consists of this Policy Document, a Technical Reference Document and an Acoustical Design Manual. The Technical Reference Document provides detailed information concerning the methods used to define existing and future noise exposure within Atascadero. The Acoustical Design Manual provides standard noise mitigation packages which may be used under some circumstances to comply with the policies of the Noise Element. It also contains background information to assist staff and the general public in evaluating the effectiveness of proposed noise mitigation measures.

The Noise Element is directed at minimizing future noise conflicts, whereas a noise ordinance focuses at resolving existing noise conflicts. A noise ordinance may be used to address noise levels generated by existing industrial, commercial, and residential uses which are not regulated by federal or state noise level standards. The regulation of noise sources such as traffic on public roadways, railroad line operations, and aircraft in flight is preempted by existing federal and/or state regulations, meaning that such sources generally may not be addressed by a noise ordinance. The Noise Element addresses the prevention of noise conflicts from all of these sources. The noise level standards of a noise ordinance should be consistent with the adopted policies of the Noise Element to achieve consistency in the implementation of noise control programs, and to provide industry with design criteria for future development or expansion.

According to the Government Code requirements, noise exposure information should be included in the Noise Element for the following major noise sources:

- a) Highways and freeways
- b) Primary arterials and major local streets
- c) Railroad operations
- d) Aircraft and airport operations
- e) Local industrial facilities
- f) Other stationary sources

Noise Sensitive uses that have been identified by the City are the following:

- a) Residential development
- b) Schools
- c) Hospitals, nursing homes
- d) Churches
- e) Meeting halls, auditoriums, music halls, theaters, libraries
- f) Transit lodging – motels and hotels
- g) Playgrounds, parks
- h) Offices

Authority

The contents of the Noise Element and the methods used in its preparation have been determined by the requirements of Section 65302 (f) of the California Government Code and by the Guidelines for the Preparation and Content of Noise Elements of the General Plan prepared by the California Department of Health Services and included in the 1990 State of California General Plan Guidelines, published by the State Office of Planning and Research. The Guidelines require that major noise sources and areas containing noise-sensitive land uses be identified and quantified by preparing generalized noise exposure contours for current and projected conditions. Contours may be prepared in terms of either the Community Noise Equivalent Level (CNEL) or the Day-Night Average Level (Ldn) which are descriptors of total noise exposure at a given location for an annual average day. The CNEL and Ldn are generally

considered to be equivalent descriptors of the community noise environment within plus or minus 1.0 dB (see Section 1.5 for definitions of the terminology used in this document).

2. Relationship to Other Elements of the General Plan

The Noise Element is related to the Land Use, Housing, Circulation and Open Space Elements of the General Plan. Recognition of the interrelationship of noise and these four mandated elements is necessary to prepare an internally consistent general plan and to initiate changes which will reduce noise exposure to acceptable levels in areas where noise presently exceeds the levels set forth by the adopted policies of the Noise Element. The relationship between these elements is briefly discussed below:

Land Use

An objective of the Noise Element is to provide noise exposure information for use in the Land Use Element. The noise contours in the Noise Element should be used to help determine appropriate land use patterns in the Land Use Element.

Housing

The Housing Element addresses sites and standards for new housing. Since residential land uses are noise-sensitive, the noise exposure information of the Noise Element must be considered when planning the locations of new housing.

Circulation

The circulation system must be correlated with the Land Use element. This is especially true for roadways which carry significant numbers of trucks. Noise exposure will thus be a decisive factor in the location and design of new transportation facilities, and in the mitigation of noise produced by existing facilities upon existing and planned land uses.

Open Space

Excessive noise adversely affects the enjoyment of recreational pursuits in designated open space, particularly in areas where quiet is a valued part of the recreational experience. Thus, noise exposure should be considered in planning for this kind of open space use. Conversely, open space can be used to buffer noise-sensitive uses from noise sources by providing setbacks and visual screening.

3. Noise and Its Effects On People

The Technical Reference Document provides discussions of the fundamentals of noise assessment, the effects of noise on people and criteria for acceptable noise exposure. It is intended that the Technical Reference Document serve as a reference for staff during the review of documents or proposals which refer to the measurement and effects of noise.

4. Noise Element Definitions

A-Weighted Sound Level (dB)

The sound level obtained by using the A-weighting filter of a sound level meter, expressed in decibels (dB). All sound levels referred to in this policy document are in A-weighted decibels. A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

Community Noise Equivalent Level (CNEL)

The equivalent energy (or energy average) sound level during a 24-hour day, obtained after the addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 9:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 9:00 p.m. The CNEL is generally computed for annual average conditions.

Day/Night Average Sound Level (Ldn)

The equivalent energy (or energy average) sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 9:00 p.m. and before 7:00 a.m. The Ldn is generally computed for annual average conditions.

Equivalent Sound Level (Leq)

The sound level containing the same total energy as a time varying signal over a given sample period. Thus, the Leq is a single-valued level that expresses the time-averaged total energy of a fluctuating sound level. For example, if 64 dB is measured for 10 minutes, 68 dB is measured for 20 minutes and 73 dB is measured for 30 minutes, the 1-hour Leq is about 71 dB. The Leq is typically computed over 1, 8, and 24-hour sample periods.

Impulsive Noise

Noise of short duration, usually less than one second, with an abrupt onset and rapid decay.

New Development

Projects requiring land use or building permits, excluding remodels or additions to existing structures.

Noise level reduction (NLR)

The arithmetic difference between the level of sound outside and inside a structure measured in decibels.

Noise-Sensitive Land Use

- a. Churches
- b. Meeting halls, auditoriums, music halls, theaters, libraries ~

- c. Transient lodging -motels and hotels
- d. Playgrounds, parks
- e. Offices

Outdoor Activity Areas

Patios, decks, balconies, outdoor eating areas, swimming pool areas, yards of dwelling units, and other areas which have been designated for outdoor activities and recreation.

Stationary Noise Source

Any fixed or mobile source not preempted from local control by existing federal or state regulations. Examples of such sources include industrial and commercial facilities and vehicle movements on private property {e.g., parking lots, truck terminals, auto race tracks, etc.)

Transportation Noise Source

Traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by existing federal or state regulations. However, the effects of noise from transportation sources may be controlled by regulating the location and design of land uses affected by transportation noise sources.

5. The Noise Environment

Overview of Sources

Based on discussions with City staff and field studies conducted during the preparation of the Noise Element, it was determined that there are a number of potentially significant sources of community noise within Atascadero, including traffic on state highways and other major roadways, railroad operations, and stationary noise sources. The Technical Reference Document includes detailed discussions of the noise levels produced by these sources.

Methods Used to Develop Noise Exposure Information

Analytical noise modeling techniques in conjunction with actual field noise level measurements were used to develop generalized Ldn or CNEL contours for major sources of noise within Atascadero for existing and future conditions.

Analytical noise modeling techniques generally make use of source-specific data, including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Analytical methods have been developed for many environmental noise sources, including roadways, railroad line operations, railroad yard operations, industrial plants, and aircraft/airport operations. Such methods will produce reliable results as long as data inputs and assumptions are valid for the sources being studied. The analytical methods used in the preparation of this Noise Element closely follow recommendations made by the State Office of Noise Control. Methods included the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model for roadway sources, the Wyle Laboratories method for determining railroad noise exposure, and the Federal Aviation Administration (FM)

Integrated Noise Model (INM) for the assessment of aircraft/airport noise sources. For industrial, commercial, and other stationary sources identified for study, a combination of source-specific noise level data and accepted calculation procedures was used to characterize noise emissions based upon operational data obtained from source operators.

Determining Noise Exposure and Mitigation for Specific Locations

The chart shown in Figure IV-7 illustrates where noise exposure information for a particular location may be found. Note that Table IV-2 should be consulted to adjust traffic noise exposure in areas with varying topography. Noise exposure information may be used to determine if a particular land use is consistent with the policies of the Noise Element, and whether or not noise mitigation should be required as apart of the project development process. Figure IV-8 is a flow chart that illustrates the process that should be followed to determine noise exposure and appropriate mitigation for specific locations.

Table IV-2: Adjustments to Traffic Noise Exposure for Topography

ADJUSTMENTS TO TRAFFIC NOISE EXPOSURE FOR TOPOGRAPHY

Topographical Situation	Distance from Center of Roadway		
	<200'	200-400'	>400'
Hillside overlooks roadway	-0-	+1 dB	+3 dB
Roadway is elevated (>15')	-5 dB	-2 dB	-0-
Roadway in cut/below embankment	-5 dB	-5 dB	-5 dB

Figure IV-6: Chart for Locating Noise Exposure Information

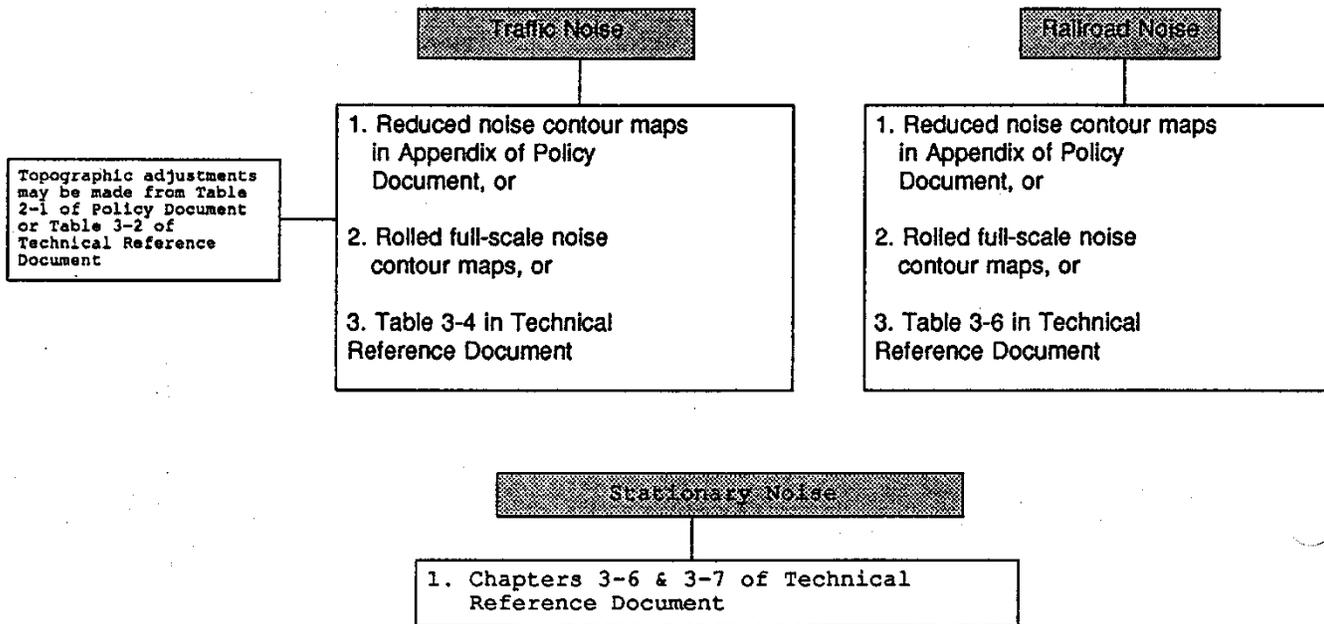
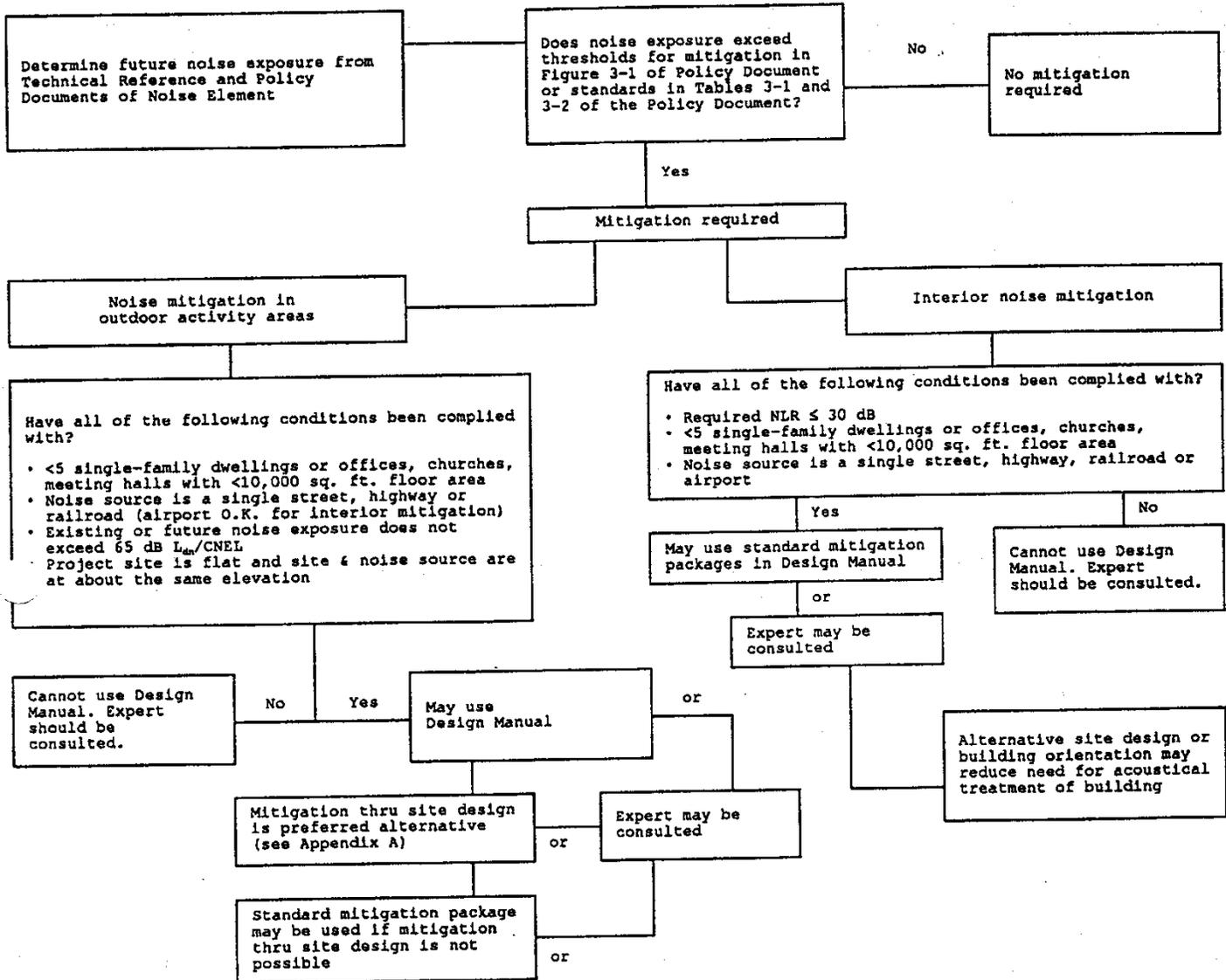


Figure IV-7: Flow Chart for Determining Noise Exposure and Mitigation

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Community Noise Survey

A community noise survey was conducted in Atascadero to document background noise levels in areas where noise-sensitive land uses are located. Results of the community noise survey indicate that existing background noise levels in many areas of the City that contain noise-sensitive land uses are relatively quiet. To preserve quiet conditions, noise level standards and policies have been adopted which will prevent degradation of the existing noise environment as much as possible. A more detailed discussion of the community noise survey may be found in the Technical Reference Document.

C. Noise Element Goals and Policies

The goals of the Atascadero Noise Element are:

- Goal SFN 6. Protect the citizens of Atascadero from the harmful and annoying effects of exposure to excessive noise.**

- Goal SFN 7. Protect the economic base of Atascadero by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.**

- Goal SFN 8. Preserve the tranquility of residential areas by preventing the encroachment of noise-producing uses.**

- Goal SFN 9. Educate the residents of Atascadero concerning the effects of exposure to excessive noise and the methods available for minimizing such exposure.**

- Goal SFN 10. Avoid or reduce noise impacts through site planning and project design, giving second preference to the use of noise barriers and/or structural modifications to buildings containing noise-sensitive land uses.**

Figure IV-8: Compatibility for New Development Near Transportation Noise Sources

**LAND USE COMPATIBILITY FOR NEW DEVELOPMENT
NEAR TRANSPORTATION NOISE SOURCES***

LAND USE	COMMUNITY NOISE EXPOSURE LDN OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL, THEATERS, AUDITORIUMS, MUSIC HALLS						
TRANSIENT LODGING- MOTELS, HOTELS						
SCHOOLS, LIBRARIES, MUSEUMS, HOSPITALS, NURSING HOMES MEETING HALLS, CHURCHES						
PLAYGROUNDS, PARKS						
OFFICES						

INTERPRETATION

 ACCEPTABLE
Specified land use is satisfactory. No noise mitigation measures are required.

 CONDITIONALLY ACCEPTABLE
Use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.

 UNACCEPTABLE
Development is usually not

* This figure indicates whether mitigation is required. See Table 3-1 for noise standards.

1. Land Use Compatibility-Transportation Policies

Figure IV-8 shows the ranges of noise exposure from transportation noise sources which are considered to be acceptable, conditionally acceptable, or unacceptable for the development of different land uses. Figure IV-8 is used to determine whether mitigation is needed for development of land uses near major transportation noise sources. In areas where the noise environment is acceptable, new development may be permitted without requiring noise mitigation. For areas where the noise environment is conditionally acceptable, new development should be allowed only after noise mitigation has been incorporated into the design of the project to reduce noise exposure to the levels specified by the policies listed in Section IV.C.1. For areas where the noise environment is unacceptable, new development in compliance with the policies of Section IV.C.1 is usually not appropriate.

The following specific policies are adopted by Atascadero to accomplish the goals of the Noise Element:

Policy 1. The noise standards in this chapter represent maximum acceptable noise levels. New development should minimize noise exposure and noise generation.

The City shall maintain a Noise Ordinance that implements the requirements of the Noise Element.

Transportation Noise Sources:

Policy 2. New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 60 dBN or CNEL (70 Ld./CNEL for playgrounds and neighborhood parks) unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to or below the levels specified for the given land use in Table IV-3.

Policy 3. Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table IV-3 within the outdoor activity areas and interior spaces of existing noise sensitive land uses.

Stationary Noise Sources:

Policy 4. New development of noise-sensitive land uses shall not be permitted where the noise level due to existing stationary noise sources will exceed the noise level standards of Table IV-4 unless effective noise mitigation measures have been incorporated into the design of the development to reduce noise exposure to or below the levels specified in Table IV-4.

Policy 5. Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated so as not to exceed the noise level standards of Table IV-4 on lands

designated for noise-sensitive uses. This policy does not apply to noise levels associated with agricultural operations.

Existing and Cumulative Noise Impacts:

Policy 6. The City shall consider implementing mitigation measures where existing noise levels produce significant noise impacts to noise-sensitive land uses or where new development may result in cumulative increases of noise upon noise-sensitive land uses.

Table IV-3: Maximum Allowable Noise Exposure - Transportation Noise Sources

MAXIMUM ALLOWABLE NOISE EXPOSURE-TRANSPORTATION NOISE SOURCES

Land Use	<u>Outdoor Activity Areas¹</u>	<u>Interior Spaces</u>	
	L _{dn} /CNEL, dB	L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Office Buildings	60 ³	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

¹ Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table IV-4: Maximum Allowable Noise Exposure – Stationary Noise Sources

MAXIMUM ALLOWABLE NOISE EXPOSURE-STATIONARY NOISE SOURCES¹

	Daytime (7 a.m. to 9 p.m.)	Nighttime (9 p.m. to 7 a.m.)
Hourly L_{eq} , dB ²	50	45
Maximum level, dB ²	70	65
Maximum level, dB-Impulsive Noise ³	65	60

¹As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

²Sound level measurements shall be made with slow meter response.

³Sound level measurements shall be made with fast meter response.

2. Implementation Programs

To achieve compliance with the policies of the Noise Element, Atascadero shall undertake the following implementation program. The implementation program focuses on the prevention of new noise-related land use conflicts by requiring that new development be reviewed to determine whether it complies with the policies in Chapter 3. If mitigation of noise impacts is necessary it shall be achieved by a) carrying out an acoustical analysis meeting the requirements of Table IV-4 or b) implementing the standard noise mitigation packages contained in the Acoustical Design Manual where conditions in the following Section are met.

The noise exposure maps in this document and the information concerning the effects of noise on people and techniques available for noise control in the Technical Reference Document and Acoustical Design Manual are used in reviewing the noise affects of new development. The Acoustical Design Manual describes standard noise mitigation packages which may be used to reduce noise exposure inside buildings and within outdoor activity areas by specified amounts. The noise exposure maps are intended as a screening device to determine when a proposed development may be exposed to excessive noise levels which require mitigation and to provide guidance in the long range planning processes. Generally, the noise exposure maps provide a conservative (worst-case) assessment of noise exposure for the major noise sources identified for study. It is probable that other major noise sources, especially stationary sources, will be identified during the project review process, since only a representative sample of such sources was evaluated during the preparation of this document.

The Technical Reference Document and Acoustical Design Manual should be used to guide determinations of whether or not proposed noise mitigation measures are a reasonable and

effective application of the techniques available, and likely to achieve the desired results. Control of noise at the source and through the thoughtful location and orientation of receiving uses should be given preference over the control of noise along the path of transmission through the use of noise barriers or the acoustical treatment of buildings.

Acoustical Mitigation Programs

1. The City shall review new public and private development proposals to determine conformance with the policies of this Noise Element.
2. Allow noise barriers and modifications to buildings containing noise-sensitive uses only when site planning alone cannot adequately accomplish noise reduction.
3. Require all noise barriers and sound attenuation walls to be constructed of architecturally attractive materials and buffered with landscaping.
4. Amend the zoning ordinance to require masonry sound attenuation barriers between commercial and residential districts.
5. When mitigation must be applied to satisfy the policies in Chapter 3.3, the following priorities for mitigation shall be observed, where feasible:
 - a) First: Setbacks/open space separation
 - b) Second: Site layout/orientation/shielding of noise-sensitive uses with non-noise-sensitive uses
 - c) Third: Construction of earthen berms
 - d) Fourth: Structural measures: acoustical treatment of buildings and noise barriers constructed of concrete, wood, or materials other than earth
6. Where the development of a project subject to discretionary approval may result in land uses being exposed to existing or projected future noise levels exceeding the levels specified by the policies, the City shall require an acoustical analysis at the time the application is accepted for processing. For development not subject to discretionary approval and/or environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. The requirements for the content of an acoustical analysis are given in the following section.

At the discretion of the City, the requirement for an acoustical analysis may be waived provided that all of the following conditions are met:

Outdoor Activity Areas Programs

- a) The development is for less than five single-family dwellings or for office buildings, churches or meeting halls having a total gross floor area less than 10,000 square feet.
- b) The noise source in question consists of a single roadway or railway for which up-to-date noise exposure information is available. An acoustical analysis will be required when the noise source in question is a stationary noise source or airport, or when the noise source consists of multiple transportation noise sources.
- c) The existing or projected future noise exposure at the exterior of buildings which will contain noise-sensitive uses or within proposed outdoor activity

areas (other than playgrounds and neighborhood parks) does not exceed 65 dB ~n(or CNEL) prior to mitigation.

- d) The topography in the project area is flat, and the noise source and receiving land use are at the same grade.

Interior Spaces

- a) Required Noise Level Reduction (NLR) is equal to or less than 30 dB.
 - b) The development is for less than five single-family dwellings or offices, churches, or meeting halls with less than 10,000 sq. ft. floor area.
 - c) Noise source in question consists of a single roadway, railway, or airport for which up-to-date noise exposure information is available. An acoustical analysis will be required when the noise source is a stationary noise source or consists of multiple transportation noise sources.
 - d) Effective noise mitigation, as determined by the City, is incorporated into the project design to reduce noise exposure to the levels specified in Table 3-1 or 3-2. Such measures may include the use of building setbacks, building orientation, noise barriers, and the standard noise mitigation packages contained in the Acoustical Design Manual. If closed windows are required in compliance with interior noise level standards, air conditioning or a mechanical ventilation system is required.
 - e) If the Community Development Director determines that a noise-sensitive land use may be exposed to noise levels that exceed the standards in Chapter 3.3, notwithstanding the noise contour information in this Noise Element, an acoustical analysis meeting the requirements in Table 4-1 may be required. An example of where this policy may apply is in areas not shown on the noise contour maps of this Noise Element where the combined impact of two or more noise sources may exceed the standards in Chapter 3.3
7. The City shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the development review and building permit processes.
 8. The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects requiring noise mitigation.
 9. The City shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC).
 10. The City shall request the California Highway Patrol, the County Sheriff, and local police departments to actively enforce the California Vehicle Code sections relating to adequate vehicle mufflers.
 11. The City shall purchase new equipment and vehicles only if they comply with noise level performance standards based upon the best available noise reduction technology. Alternatives to the use of existing noisy equipment, such as leaf blowers, shall be pursued.
 12. The City shall periodically review and update the Noise Element to ensure that noise exposure information and specific policies are consistent with changing conditions within the City and with noise control regulations or policies enacted after the adoption of this element.

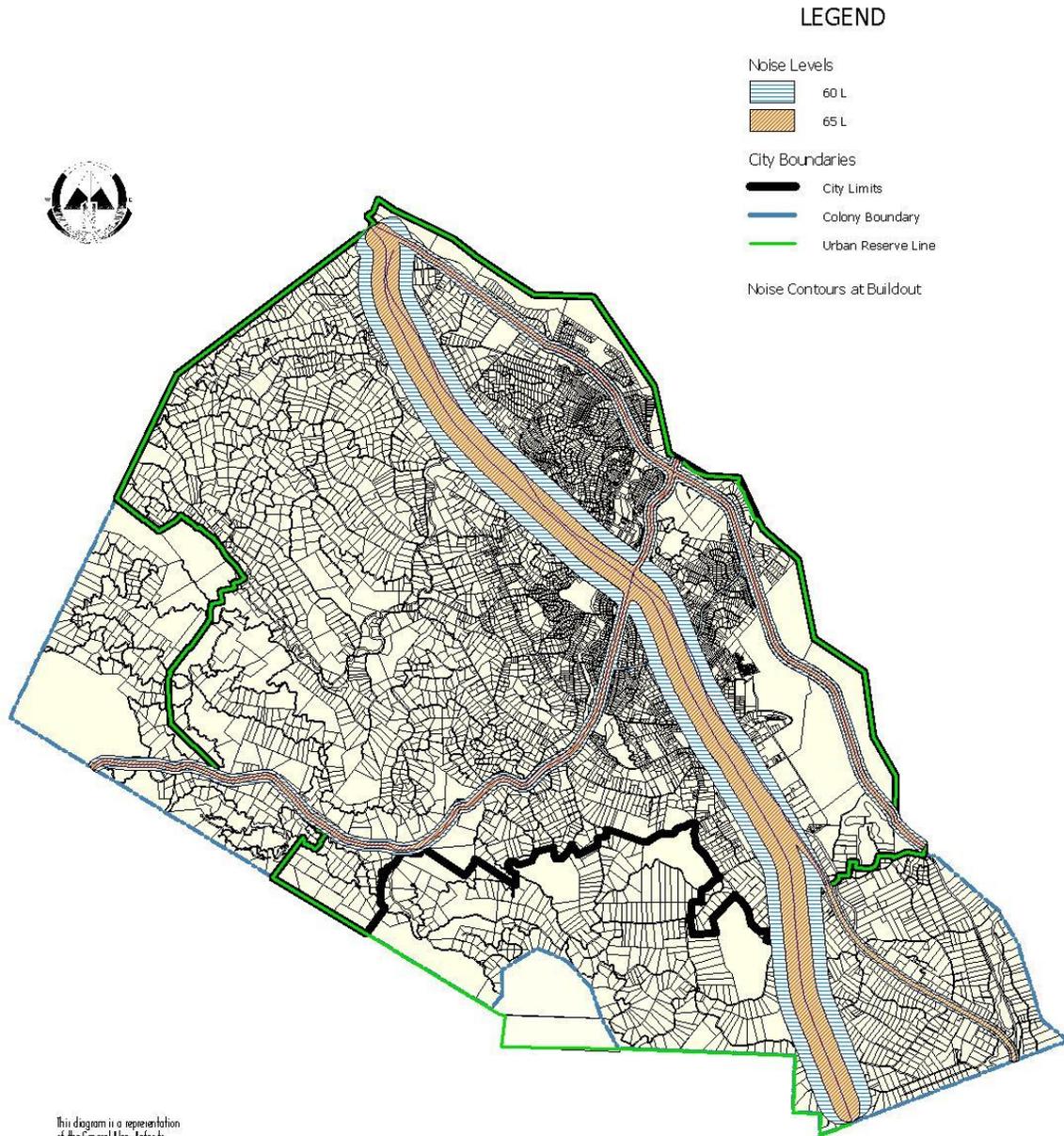
13. The City shall make the Acoustical Design Manual available to the public so that the public can incorporate noise reduction measures into private projects consistent with the goals and policies of this Noise Element.
14. The City shall consider one or more of the following mitigation measures where existing noise levels significantly impact existing noise-sensitive land uses or where cumulative increase in noise levels resulting from new development significantly impact noise-sensitive land uses:
 - a) Rerouting traffic onto streets that have low traffic volume onto streets that do not adjoin noise-sensitive land uses.
 - b) Rerouting trucks onto streets that do not adjoin noise-sensitive land uses.
 - c) Construction of noise barriers.
 - d) Lowering speed limits
 - e) Acoustical treatment of buildings
 - f) Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment by developer fees.

Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:

15. Be the financial responsibility of the applicant.
16. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
17. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. Where actual field measurements cannot be conducted, all sources of information used for calculation purposes shall be fully described. When the use being studied is a commercial or industrial use, all noise sources related to the service and maintenance of the facility shall be considered, including but not limited to parking lot and landscape maintenance, refuse collection and truck loading/unloading activities, amplified sound, outdoor sales and activities, and all other noise sources associated with operation, maintenance, and service.
18. Estimate existing and projected (20 years) noise levels in terms of the descriptors used in Table IV-2 and Table IV-3, and compare those levels to the adopted policies of the Noise Element. Projected future noise levels shall take into account noise from planned streets, highways, and road connections.
19. Recommend appropriate mitigation to meet or exceed the policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
20. Estimate noise exposure after the prescribed mitigation measures have been implemented.
21. Describe a post assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Figure IV-9: Noise Contour Map



This diagram is a representation of the General Plan. Refer to official GIS maps for any boundary determination.

Exhibit original published in color.