

PUBLIC SAFETY ELEMENT REDLINE



Introduction to Public Safety

The goal of Lake Forest's Public Safety Element is to reduce the risk of death, injury, property damage, economic loss, and harm due to natural and manmade disasters. This element will view risks on both a short-term and long-term basis, and will place a special emphasis on local and regional risk factors.

The Public Safety Element closely relates to the Public Facilities Element and supports the City's Emergency Management Plan. The long-term risks associated with Climate Change are also addressed in here.

Organization of Element

The Public Safety Element will address each of the topics below as they relate to Lake Forest. The goals and policies of this element are organized around the following topics:

- *Seismic and Geologic Hazards*
- *Fire Safety*
- *Flooding*
- *Hazardous Waste and Materials*
- *Emergency Operations*
- *Noise*
- *Climate Change and Resiliency Planning*

Contents:

- + Seismic and Geologic Hazards
- + Fire Safety
- + Flooding
- + Hazardous Waste and Materials
- + Emergency Operations
- + Noise
- + Climate Change and Resiliency Planning

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GOAL PS-1 NOISE

A comfortable community environment that is free from excessive noise pollution.

PS-6 Policies

- PS-6.1 **Land Use Planning.** Require development and infrastructure projects to be consistent with the maximum allowable noise exposure ~~standards/criteria~~ identified in Table PS-1 to ensure acceptable noise levels for ~~existing and~~ future development.
- PS-6.2 **Noise-Sensitive ~~Facilities~~ Land Uses.**¹ Ensure appropriate ~~mitigation~~ ~~is~~ ~~features~~ ~~are~~ incorporated into the design of noise-sensitive ~~facilities/land uses~~ to ~~minimize noise impacts/prevent unacceptable noise exposure~~.
- PS-6.3 **Site Design.** Require site planning and project design techniques to minimize noise impacts adjacent to sensitive uses.
- PS-6.4 **Noise Control.** Ensure that noise levels do not exceed the limits established in Table PS-2 by incorporating sound-reduction design in new construction ~~or revitalization and retrofit~~ projects impacted by non-transportation-related noise sources.
- PS-6.5 **Roadway Noise.** Encourage nonmotorized transportation alternatives for local trips and the implementation of noise sensitivity measures in the public realm, including traffic-calming road design, lateral separation, natural buffers, and setbacks to decrease excessive motor vehicle noise.
- PS-6.6 **Highway Noise.** Continue to coordinate with the California Department of Transportation (Caltrans) and the Transportation Corridor ~~Agency~~ Agencies (TCA) to achieve maximum noise abatement in the design of new highway projects or improvements along I-5 ~~and CA-241~~.
- PS-6.7 **Vehicles and Trucks.** Monitor and enforce ~~existing~~ speed limits and motor vehicle codes requiring adequate mufflers on all types of vehicles traveling through the ~~e~~City.
- PS-6.8 **Commercial Noise.** Require the use of noise attenuation measures, including screening and buffering techniques, for all new commercial development expected to produce excessive noise; in existing ~~cases~~ where the City's noise standards are exceeded, work with Code Enforcement to require compliance.
- PS-6.9 **Interjurisdictional Coordination.** Coordinate with neighboring cities to ~~prevent and~~ minimize ~~exceedance of~~ noise ~~conflicts/standards between land uses~~ along the City's boundaries.
- PS-6.10 **Airplane Noise.** Maintain communication with John Wayne Airport and other relevant air transportation agencies to ~~ensure that all future plans have limited~~ ~~minimize the noise-related~~ impacts ~~of air travel onto~~ the ~~community of Lake Forest~~City.

¹ "Noise Sensitive Land Uses" includes residential uses, churches, hospitals, and schools.

PS-6 Actions

PS-6a ~~(reserved) Update Chapter 11.16 of the Lake Forest Municipal Code to ensure that the noise standards are consistent with this General Plan, including Tables PS-1 and PS-2, and to require new residential, mixed-use with a residential component, and other noise sensitive development to be designed to minimize noise exposure to noise sensitive uses through incorporation of site planning and architectural techniques. The update shall also include noise standards for residential uses within a mixed-use development, which may differ from other adopted residential noise standards.~~

PS-6b ~~To ensure that noise does not adversely affect new sensitive receptors, the City will use land use compatibility noise criteria for various land use types in Table PS-1 when making planning and development decisions. The criteria in Table PS-1 represent the acceptable noise level for new sensitive receptors. Review new development projects for compliance with the noise requirements established in this General Plan, including the standards established in Tables PS-1 and PS-2.~~

~~Existing and future noise contours from transportation noise in the City are provided in Figure 1 and Figure 2. The future noise contours in Figure 2 will be used as a guide for land use and development decisions. If the noise level at a project does not exceed the outdoor activity area allowable noise level in Table PS-1, the project is considered compatible with the noise environment.~~

~~If the project will exceed the allowable outdoor activity area and interior space noise levels in Table PS-1, the project proponent shall be required to demonstrate (with an acoustical analysis) that the project is designed to attenuate noise to meet the criteria in Table PS-1, and California Building Standards Code, and California Green Building Standards Code (Title 24) interior noise standards. If the project is not designed to meet the noise criteria, mitigation measures may be recommended in the analysis. If the analysis demonstrates that the noise criteria can be met with implementation of the mitigation measures, the project may be approved with the mitigation measures required as conditions of project approval. Where necessary, require new development to~~Excessive noise may be mitigated excessive noise through best practices, which may include, but are not limited to, including building relocation or reorientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant buffering features structures between noise sources and sensitive receptors, and use of noise-minimizing materials such as rubberized asphalt.

PS-6c ~~To ensure that noise from new development does not adversely affect existing sensitive receptors, the City will r~~Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate stationary noise impacts which exceed the ~~criteria standards~~ identified in ~~Table PS-2~~this General Plan. The studies shall include ~~representative existing ambient~~ noise measurements, estimates of ~~existing and~~ projected noise levels, and mitigation measures necessary to ensure compliance with this element.

PS-6d In making a determination of traffic noise impacts under the California Environmental Quality Act (CEQA), a substantial increase will occur if ambient noise levels have a substantial increase. Generally, a 3 A-weighted decibel (dBA) increase in noise levels is barely perceptible, and a 5 dBA increase in noise levels is clearly perceptible. Therefore, increases in noise levels shall be considered ~~to be~~ substantial when the following occurs:

- When existing noise levels are less than 60 dBA Community Noise Equivalent Level (CNEL), a 5 dBA CNEL increase in noise will be considered substantial;
- When existing noise levels are between 60 dBA and 65 dBA CNEL, a 3 dBA CNEL increase in noise will be considered substantial;

- When existing noise levels exceed 65 dBA CNEL, a 1.5 dBA CNEL increase in noise will be considered substantial.

PS-6e ~~(reserved) Update the City's Noise Ordinance (Chapter 11.16) to reflect the noise standards established in this General Plan and proactively enforce the City's Noise Ordinance, including requiring the following measures for construction:~~

- ~~• Restrict construction activities to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. No construction shall be permitted outside of these hours or on Sundays or federal holidays, without a specific exemption issued by the City.~~
- ~~• A Construction Noise Management Plan shall be submitted by the applicant for construction projects, when determined necessary by the City. The Construction Noise Management Plan shall include proper posting of construction schedules, appointment of a noise disturbance coordinator, and methods for assisting in noise reduction measures.~~
- ~~• Noise reduction measures may include, but are not limited to, the following:~~
 - ~~○ Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible.~~
 - ~~○ Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. This muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available. This could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.~~
 - ~~○ Temporary power poles shall be used instead of generators where feasible.~~
 - ~~○ Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City of provide equivalent noise reduction.~~
 - ~~○ The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.~~
 - ~~○ Delivery of materials shall observe the hours of operation described above. Truck traffic should avoid residential areas to the extent possible.~~
- ~~• Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to the building. A vibration limit of 0.30 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.~~

PS-6f The City shall require new residential projects located adjacent to ~~major freeways, hard rail lines, or light~~ rail lines to follow the FTA vibration screening distance criteria to ensure that residential

uses are not exposed to vibrations exceeding 72 VdB for frequent events (more than 70 events per day), 75 VdB for occasional events (30-70 events per day), or 80 VdB for infrequent events (less than 30 events per day). This shall be accomplished through a vibration study estimating vibration levels at the habitable buildings of the vibration-sensitive use and providing reduction measures necessary to ensure compliance with FTA vibration impact criteria.

Table PS-1: Land Use Compatibility for Community Noise Environment

Land Use ¹	Outdoor Activity Areas ^{2,3}	Interior Spaces	
		Ldn/ CNEL, dB	Leq, dB ⁴
Residential	60	45	–
Motels/Hotels	65	45	–
Mixed-Use	65	45	–
Hospitals, Nursing Homes	60	45	–
Theaters, Auditoriums	–	–	35
Churches	60	–	40
Office Buildings	65	–	45
Schools, Libraries, Museums	70	–	45
Playgrounds, Neighborhood Parks	70	–	-
Industrial	75	–	45
Golf Courses, Water Recreation	70	–	–

1. Where a proposed use is not specifically listed, the use shall comply with the criteria standards for the most similar use as determined by the City.

2. Outdoor activity areas for residential development are considered to be the backyard patios or ~~decks balconies~~ of single-family units and the common areas where people generally congregate for multi-family and residential components of mixed-use developments. Where common outdoor activity areas for multi-family and residential components of mixed-use developments comply with the outdoor noise level criteria standard, the criteria standard will not be applied at private patios or ~~decks balconies~~ of individual units provided noise-reducing measures are incorporated (e.g., orientation of patio/~~balcony deck~~, screening of patio with masonry or other noise-attenuating material). Outdoor activity areas for non-residential developments are the common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities. ~~not all residential developments include outdoor activity areas.~~ New multi-family developments and residential components of mixed-use developments with balconies or patios that are exposed to noise that exceeds the outdoor criteria in this table are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

3. In areas where it is not possible for a new project to reduce exterior noise levels to achieve the outdoor activity area criteria standard ~~w~~-using a practical application of the best noise-reduction technology, as determined by a qualified acoustician, an increase of up to 5 Ldn-CNEL over the outdoor standard will be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with this table

4. Determined for a typical worst-case hour during periods of use.

5. In accordance with Policy PS-6b, this table shall be used for land use compatibility noise criteria for when making planning and development decisions. These criteria represent the acceptable noise level for new sensitive receptors. These criteria are not to be retroactively applied for existing uses. These criteria are also not generally intended for use as CEQA significance thresholds for noise generated by new projects to existing receptors; that purpose is achieved by Table PS-2.

6. Abbreviations: dB = decibel; Leq = equivalent noise level; Ldn = Day-Night Average Level; CNEL = community noise equivalent level.

Table PS-2: Performance Criteria Standards for Stationary Noise Sources, Including Affected Projects^{1,2,3,4,5,6}

Land Use	Noise Level (dBA Leq)	Noise Level (dBA Lmax)	Time Period
<u>Residential in Residential Zones</u>	<u>60</u>	<u>80</u>	<u>7:00 a.m. – 10:00 p.m.</u>
	<u>50</u>	<u>70</u>	<u>10:00 p.m. – 7:00 a.m.</u>
<u>Residential Portion of Mixed-Use in Mixed-Use Zones</u>	<u>65</u>	<u>85</u>	<u>7:00 a.m. – 10:00 p.m.</u>
	<u>50</u>	<u>70</u>	<u>10:00 p.m. – 7:00 a.m.</u>

1. In the event the alleged offensive noise consists entirely of Impulsive Noise, Simple Tone Noise, speech, music, or any combination thereof, each of the above Noise Levels shall be reduced by five dBA. Such noises are generally considered to be particularly annoying and are a primary source of noise complaints.
2. If the alleged offense affects a property outside the City's jurisdiction, the exterior noise criteria shall be enforced at the City boundary.
3. In the event the measured Ambient Noise Level exceeds any of the noise limit categories above, the noise limit shall be increased to said Ambient Noise Level.
4. If the noise source and the affected property are within different land use categories, the noise criteria of the affected property shall apply.
5. For Mixed-Use residential land uses affected by noise on the same property (e.g., commercial sources affecting the residential portion of the same property), the exterior noise guideline shall be enforced at exterior areas which are provided for private or group usable open space purposes. Private usable open space is defined as usable open space intended for use of occupants of one Dwelling Unit, normally including yards, decks, and balconies. Group usable open space is defined as usable open space intended for common use by occupants of a development, including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and bicycle trails, but not including off-street parking and loading areas or driveways.
6. In accordance with Policy PS-6c, this table shall be used to determine the potential for stationary noise impacts from discretionary projects that would then be required to complete an acoustical study. These criteria may be used as CEQA significance thresholds for noise generated by new projects to existing receptors.

	<u>7 am to 10 pm</u>	<u>10 pm to 7 am</u>
Hourly Leq, dBA	<u>55</u>	<u>50</u>

1. Each of the noise levels specified above should be lowered by 5 dB for simple noise tones, noises consisting primarily of speech or music, or recurring impulsive noises. Such noises are generally considered to be particularly annoying and are a primary source of noise complaints.
2. No standards have been included for interior noise levels. Standard construction practices should, with the exterior noise levels identified, result in acceptable interior noise levels.
3. Stationary noise sources which are typically of concern include, but are not limited to, the following:

- HVAC Systems ————— Cooling Towers/Evaporative Condensers
- Pump Stations ————— Lift Stations
- Emergency Generators ————— Boilers
- Steam Valves ————— Steam Turbines
- Generators ————— Fans
- Air Compressors ————— Heavy Equipment
- Conveyor Systems ————— Transformers
- Pile Drivers ————— Grinders
- Drill Rigs ————— Gas or Diesel Motors
- Welders ————— Cutting Equipment
- Outdoor Speakers ————— Blowers

4. The types of uses which may typically produce the noise sources described above include but are not limited to: industrial facilities, pump stations, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

GOAL PS-2 Goal PS-5 Emergency Operations

A community that is highly prepared and equipped to handle emergency situations, in order to minimize loss of life, injury, property damage, and disruption of vital services.

PS-5 Policies

- PS-5.1 **Critical Facilities.** Coordinate with service providers to ensure the resilience of critical facilities, lifeline services, and infrastructure, and plan for the use of critical facilities during post-disaster response and recovery.
- PS-5.2 **Emergency Preparedness Plans.** Maintain an updated Emergency Operations Plan specific to Lake Forest.¹
- PS-5.3 **Local Coordination.** Coordinate with local key stakeholders (officials, schools, businesses, and organizations) within the community to make them aware of their role in the emergency plan and the necessary requirements in case of emergency.
- PS-5.4 **Automatic and Mutual Aid.** Continue to participate in automatic and mutual aid agreements with adjacent service providers to ensure efficient and adequate resources, facilities, and support services during and after emergencies.
- PS-5.5 **Communications.** Evaluate the potential to utilize a comprehensive emergency communication system that allows for efficient connection in case of emergency.
- PS-5.6 **Emergency Evacuation Routes and Access.** Work with the Orange County Fire Authority and the Orange County Sheriff's Department to maintain, update, and regularly exercise emergency access, protocols, and evacuation routes to assess their effectiveness.
- PS-5.7 **Emergency Shelters.** Periodically coordinate with emergency shelter providers to ensure that necessary equipment supplies are available in case of emergency.
- PS-5.8 **Community Training Programs.** Continue to support community-based emergency training programs as a valuable asset to the community.
- PS-5.9 **Public Awareness.** Prepare residents for emergency situations by making emergency strategies, including evacuation routes, publicly-known and easily accessible.
- PS-5.10 **School Safety.** Coordinate with local schools related to their programs and practices regarding emergency preparedness.

PS-5 Actions

- PS-5a Explore grant funding for the preparation of a Local Hazard Mitigation Plan for the City of Lake Forest.
- PS-5b Regularly practice implementation of the City's Emergency Operations Plan and update it regularly.
- PS-5c Regularly review County and State emergency response procedures that must be coordinated with City procedures.

¹ [The Local Hazard Mitigation Plan \(LHMP\) for the City of Lake Forest was developed in accordance with the Disaster Mitigation Act of 2000 \(DMA 2000\) and followed FEMA's Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The LHMP is a separate document adopted into the Safety Element of the General Plan by Resolution No. 2024-36, in compliance with AB 2140. It is available electronically at <https://lakeforestca.gov/en/LHMP>.](https://lakeforestca.gov/en/LHMP)