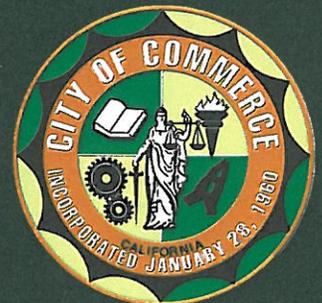




THE MODEL CITY  
**CITY OF COMMERCE**



**HEARING**  
**CONSERVATION PLAN**



# CITY OF COMMERCE

## HEARING CONSERVATION

### 1.0 Purpose

1. To establish a program (procedure) for protecting employees from occupational hearing loss during work operations.

### 2.0 General

1. State OSHA regulations require that employees be included in a hearing conservation program and use protective devices, such as ear plugs or ear muffs, whenever they are exposed to noise levels in excess of 85dBA.

### 3.0 Definitions

1. **Noise Intensity** - The sound pressure level measured by a noise dosimeter. It is the loudness of the noise.
2. **Noise Frequency** - The measurement of pitch. The high frequencies are more damaging than the low frequencies.
3. **Duration** - The time of exposure; the longer the exposure, the greater the potential for hearing loss.

### 4.0 Responsibilities

1. The Safety Program Administrator is responsible for administering and monitoring this procedure.
2. The Department Head is responsible for execution and performance of this procedure.

### 5.0 Monitoring

1. When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the City shall obtain measurements for employees who may be exposed at or above that level.
2. The monitoring requirement shall be met by personal or area monitoring that is representative of the employee's exposure.
3. All continuous, intermittent and impulsive sound levels from 80 dB to 130 dB shall be integrated into the computation.

4. Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.
5. Monitoring shall be repeated whenever a change in production, process, equipment or controls changes noise exposures to the extent that:
  - A. Additional employees may be exposed at or above the action level; or
  - B. The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements of Cal-OSHA regulations.
6. The City shall provide affected employees with an opportunity to observe any measurements of employee noise exposure, which are conducted pursuant to this section.
7. The City shall notify each employee exposed at or above the action level of the results of the monitoring.
8. SPECIAL NOTE: Exposure to noise levels in excess of 85 dBA is well documented for public works, water, transit, maintenance and sanitation employees. The City is starting this hearing conservation program based on noise monitoring results of public works employees as identified in Appendix A. Monitoring of employees will be conducted at a later date.

## 6.0 Procedure

1. Hearing protection devices shall be worn by employees working with equipment where the sound level is above 85 dBA, as reflected on the "A" scale of a noise dosimeter (sound level analyzer). This includes the use of equipment identified in Appendix A.
2. A Permissible Exposure Limit (PEL) for exposure to continuous noise levels has been established by Cal-OSHA. It takes into consideration the time weighted average of exposure at various sound levels as follows:

<u>DURATION (HRS/DAY)</u>	<u>SOUND LEVEL (DBA)</u>
8	90
4	95
2	100
1	105
½	110
¼	115
	(MAX PERMITTED)

3. Exposure to impact noises shall not exceed the limits as follows:

<u>SOUND LEVEL (db)</u>	<u>PERMITTED NUMBER OF IMPULSES OR IMPACTS PER DAY</u>
140	100
130	1,000
120	10,000

No exposure in excess of 140 decibels peak sound pressure level is permitted.

4. Impulsive or impact noise is considered to be those variations in noise levels that involve maximum at intervals of greater than one per second. When the intervals are less than one second, the noise is considered continuous.
5. In all cases when the levels listed above are exceeded, a continuing effective hearing conservation program shall be administered and enforced. Three methods to reduce exposure to noise hazards are as follows:
  - A. Noise reduction shall be accomplished by the use of mufflers, insulated sound enclosures, laminated vibration softeners in machinery mounts, sound reducing panels, walls and ceilings of sound absorbing materials and/or shutting off machinery.
  - B. Exposure reduction can be accomplished by scheduling manpower, alternating personnel, or removing employees from the exposure until the noise source is corrected.
  - C. Personal protection shall be provided in the form of ear plugs or ear muffs. Enforcement of their use is a requirement for a good hearing conservation program.

## 7.0 Hearing Conservation

1. The City has established a continuing, effective hearing conservation program for employees who are exposed to noise at or greater than 85 dBA time weighted average.
2. As an element of our Hearing Conservation Program all employees who are exposed at or above the 85 dBA action level will be included in an audiometric testing program, which will:
  - A. Be provided at no cost to the employee.

- B. Include a baseline audiogram as part of the initial physical examination and an annual updated audiogram.
  - C. Be conducted and evaluated by a licensed or certified audiologist, otolaryngologist or physician.
  - D. Be conducted with audiometric equipment, which has been calibrated and meets the requirements of Cal-OSHA regulations.
3. All audiograms will be compared to the employee's baseline to determine if the audiogram is valid and if a threshold shift of 10 dB or more at 2000, 3000 and 4000 Hz has occurred in either ear (Standard Threshold Shift). To facilitate such comparisons the City will supply the audiologist with a copy of the Cal-OSHA Noise Exposure regulations (if needed), the baseline and most recent audiogram for the employee.
4. If evaluation of the audiogram determines that a standard threshold shift has occurred the City will:
- A. Inform the employee of this fact in writing within 21 calendar days of receipt of the audiogram results.
  - B. Train employees not previously using hearing protection in their use and care and require that hearing protection be worn.
  - C. Refit and retrain employee currently using protective equipment and provide them with protective equipment providing greater attenuation as appropriate.
  - D. Refer the employee for a medical evaluation as appropriate.
5. Field employees of the listed departments shall be included in the City's Hearing Conservation Program:
- Parks
  - Public Works and Development Services
  - Transportation

## **8.0 Protective Equipment**

1. The City will supply at no cost to employees exposed to 85 dBA or greater, or who have experienced a standard threshold shift, appropriate hearing protection. Employees will be allowed to choose from an assortment of protective equipment. Employees will be required to wear selected protective equipment when using high noise equipment.

2. Protective equipment attenuation will be evaluated for the specific noise environments per Cal-OSHA Methods for Estimating the Adequacy of Hearing Protector Attenuation.
3. Protective equipment must attenuate noise exposures to at least 90 dB unless the employee has experienced a standard threshold shift, which will require attenuation to 85 dB.
4. Protective equipment adequacy will be evaluated whenever employee exposures increase to the extent that the protective equipment may no longer provide adequate attenuation.

## **9.0 Training**

1. All employees exposed to noise at or above 85 dBA time weighted average will attend an annual training program, which will include:
  - A. The effects of noise on hearing.
  - B. The purpose of protective equipment, advantages, disadvantages and attenuation of the various types. Instruction on selecting, fitting, using and caring for protective equipment.
  - C. The purpose and procedures for audiometric testing.
  - D. Their right to access Cal-OSHA regulations and where it is posted in the workplace.
  - E. Any additional information pertaining to Noise Exposure Regulations, as supplied by the U. S. Department of Labor, Occupational Safety and Health Administration.

## **10.0 Recordkeeping**

1. The Human Resources Department will maintain accurate records of all elements of the Hearing Conservation Program.
2. Employee exposure measurements will be maintained for a period of 2 years.
3. Audiograms will be maintained for the duration of employment and will include:
  - A. Employee name and job classification
  - B. Date of audiogram

- C. The examiner's name
- D. Date of the last calibration of the audiometer
- E. Employee's most recent noise exposure assessment

**CITY OF COMMERCE**  
**HEARING CONSERVATION PROGRAM**  
**APPENDIX A**

<b>Equipment / Activity</b>	<b>Noise Level Readings dBA*</b>
Jackhammer	100 – 108
Front End Loader	83 – 97
Sweeper	82 – 90
Water Pump	85+
Sandblaster	85+
Paint Stripper	85+
Dump Truck	81 – 86
Weed Eater	95 – 100
Chainsaw	99 – 104
Generator	89 – 105
Backhoe	85 – 92
Mower	90 – 96
Concrete Saw	85+
Concrete Mixer	85+
Hedge Trimmer	82 – 88
Blower	82 – 90

\* Survey results from Los Angeles County Department of Public Works Noise Survey supplied by LA County Risk Management. Exact readings may vary with specific equipment, operations and operator location. These readings are used to provide a beginning baseline for the City to establish a Hearing Conservation Program.

CITY OF COMMERCE

HEARING CONSERVATION PROGRAM



Michael A. Casalou  
Human Resources Director

9-23-15

Date



Jorge Rifá  
City Administrator

09-24/2015

Date

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