



**San Diego Unified School District**

*Hearing*  
*Conservation*  
*Program*

**Safety Office**  
2011

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# San Diego Unified School District

## Hearing Conservation Program

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### 1) REFERENCES

- California Code of Regulations, Title 8, Sections 5095 – 5100

### 2) POLICY

It is the policy of San Diego Unified School District (SDUSD) to establish and maintain a Hearing Conservation Program (HCP) which protects District employees from hazardous noise in the work environment and which meets or exceeds all federal and state regulations. Employees whose noise exposures equals or exceeds an 8-hour, time-weighted average (TWA) of 85 decibels measured on the A scale (dB[A]) of a sound level meter shall participate in the program. SDUSD program involves the coordinated application of the following elements:

- Noise monitoring
- Audiometric testing
- Control of noise exposure
- Employee training
- Record keeping

### 3) DEFINITIONS

**Action Level** - Any 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response, or equivalently, a dose of fifty percent

**Audiogram** - A chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

**Baseline Audiogram** - The audiogram against which future audiograms are compared.

**Decibel (dB)** - Unit of sound level measurement.

**Hearing Protector Devices (HPD)** – A device inserted into or placed over the ear for the purpose of reducing air-conducted sounds, e.g. ear plugs or muffs.

**Otolaryngologist** - A physician specializing in diagnosis and treatment of disorders of the ear, nose and throat.

**Sound Level Meter** - An instrument for the measurement of sound level.

**Standard Threshold Shift (STS)** - A difference of 10 decibels (dB) at 2,000, 3,000, and 4,000 hertz indicated when annual audiogram is compared to past audiograms.

**Time Weighted Average (TWA)** - An average value of exposure over the course of an 8 hour work shift.

### 4) RESPONSIBILITY

#### Supervisors

- When feasible, implement engineering control methods to reduce excessive noise levels.
- Ensure that noise control is considered when procuring equipment, machinery, and tools
- Request a noise exposure analysis from the Safety Office whenever a noise hazard is suspected in the work environment.

- Encourage employees scheduled for audiometric testing to avoid high levels of non-occupational noise exposure greater than 80 dB (A) during the 14-hour period immediately preceding their test.
- Ensure employees wear appropriate HPDs on the job prior to testing.
- Ensure employees attend the annual hearing conservation training class.
- Ensure employees wear the HPDs when required.
- Ensure appropriate warning placards are posted at facilities or on equipment with high noise levels (> 85 dbA hearing protection recommended; > 90 hearing protection required).

#### Employees

- Wear HPDs when required.
- Seek out replacements HPD's when worn or not working properly.
- Keep HPDs in sanitary and useable condition.
- Attend required annual training.
- Participate in required annual audiometric testing.
- Inform supervisors of any noise hazards they feel are not adequately addressed.

#### Safety Office

- Establish and update the written Hearing Conservation Program
- Assist departments in identifying employees to be included in the Hearing Conservation Program
- Provide consultation/training to departments according to their specific needs
- Assist department in developing methods for noise abatement, reduction, or control
- Recommend personal protective devices for applicable departments
- Conduct noise level surveys to determine which employees must be included in the HCP
- Maintain training records
- Maintain and make available records of exposure measurements and audiometric test records

### 5) NOISE MONITORING

The District shall perform the following:

- Conduct noise surveys to identify noise hazard areas. When exposure may equal or exceed the TWA of 85 dBA, the noise monitoring shall take into account all continuous, intermittent, and impulsive sound levels from 80-130 dB (A) and may be met by either area or personal monitoring that is representative of the employee's exposure
  - Note: Instruments used for monitoring employee exposures shall be calibrated to ensure that the measurements are accurate.
- Conduct noise surveys throughout district facilities when needed to determine if employee noise exposures have changed, or where changes in production, processes, equipment, or controls have occurred that may have changed noise exposures.

- Maintain an accurate record of all noise exposure measurements.
- Notify affected employees exposed at or above the action level.

## 6) AUDIOMETRIC TESTIG

Annual audiograms should be conducted at the beginning of the work shift, if possible.

Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining and checking calibration and proper functioning of the audiometers being used.

If additional testing is necessary the employee shall be referred for a clinical audiological evaluation or an otological examination.

Employees will be notified of the noise monitoring results and if they have a suspected Standard Threshold Shift (STS) will obtain a second audiometric test within 30 days of the first test to confirm if a STS has occurred. **If an STS is confirmed, a safety investigation will be conducted to review the use of HPDs and training.**

If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift the employee shall be informed of this fact, in writing, within 21 days of the determination.

Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that:

- An employee not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them. In addition, the employee's supervisor will be informed that the employee must wear the hearing protectors.
- An employee already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.
- Refer the employee for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.
- Inform the employee of the need for an otological examination if a medical pathology of the ear which is unrelated to the use of hearing protectors is suspected.

## 7) CONTROL OF NOISE EXPOSURE

The control of noise exposure is required if the noise is greater than 90 dB. There are three types of control measures that may be used to limit noise exposures. In preferential order, they are engineering, administrative, and personal protective controls. Engineering

controls are generally permanent solutions, whereas administrative controls and personal protective controls require constant monitoring to ensure adequate implementation.

Effective control of noise through engineering controls is the most desirable hearing conservation measure since engineering controls can eliminate the hazard and render other elements of the program unnecessary. Whenever feasible, engineering control methods shall be used to reduce excessive noise levels to the maximum extent possible. Engineering control methods include use of sound dampening materials, enclosing equipment, anti-vibration pads and bases, and routine maintenance for correct equipment operation.

Engineering noise control is generally deemed feasible if implementation is technologically, operationally and fiscally practical. New process equipment shall be purchased or designed with consideration for non-hazardous noise levels. Engineering control measures shall be a consideration in the design of new facilities where there is potential for hazardous levels of noise.

Administrative controls would be the next desirable method if engineering is not possible or feasible. Rotation worker's shifts, Schedule machine operation during hours with less employees and rotate workers to jobs with lower exposure levels throughout their work day should be considered as an option to control exposure to noise levels. Such controls shall be designed to reduce the noise exposure of the employee to below 85 dB (A) over an 8 hour TWA.

If engineering and administrative controls fail to reduce noise levels to within permissible exposure levels, HPDs shall be made available and used by employees to reduce noise exposure levels to within the permissible exposure levels.

No single type of HPD is best for all employees under every work condition. A selection of various HPDs shall be made available to the employee by the District to achieve the best noise reduction, comfort, and fit.

Earplugs are designed to provide protection for those who are exposed to noise of long duration.

**Note:** Earplugs shall not be worn by personnel suffering from abnormal or collapsed ear canals or by those having ear infections and/or drainage problems. In these situations earmuffs are recommended.

Employees shall wear double hearing protection (i.e., earplugs and earmuffs) when exposed to noise levels of 100 dB (A) or greater.

The Noise Reduction Rating (NRR) describes the average sound level reduction (attenuation) provided by a HPD in a laboratory test. Since the NRR is based on laboratory testing, it does not take into account the loss of protection that occurs when hearing protectors are not fitted properly or when they are not worn for the entire time that the wearer is exposed to noise. NRR must reduce noise level to 90 (or 85 if STS detected or employee has not yet had an audiogram). When using the NRR to assess hearing protector adequacy, one of the methods specified in Appendix E will be used.

## **8) TRAINING**

The district shall establish a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 dBA. It shall be repeated annually for each employee included in the HCP. Information provided in the training program will be updated to be consistent with changes in protective equipment and work processes. The training will include the following elements:

- Effects of noise on hearing
- The purpose of hearing protectors, the advantages, disadvantages, and lessening of various types
- Instructions on selection, fitting, use, and care of hearing protectors
- The reason for audiometric testing, and an explanation of the test procedures

## **9) RECORD KEEPING**

The district shall retain noise exposure measurement records for at least 2 years and audiometric test records shall be retained for the duration of the affected employee's employment.