



Board Policy 6816 Hearing Conservation Program

It is the express policy of the West Hills Community College District (WHCCD) not to expose employees to sound levels greater than 80dBA as a time weighted average (TWA), without ensuring protective engineering or administrative controls have been implemented or personal protective equipment will be utilized. This program is designed to eliminate or reduce, to the maximum extent practicable, employees' occupational exposures to excessive noise. It is the responsibility of all supervisors, managers, faculty, and staff to understand and ensure the provisions of this program are followed. It is the supervisors' responsibility to quantify the noise to which an employee may be exposed and to implement engineering, administrative, or personal protective equipment (PPE) controls to protect the health of the employee.

It is the responsibility of all WHCCD employees to observe precautions and utilize PPE as required in order to minimize exposure to excessive noise. Employees will always follow required procedures regardless of anticipated duration of exposure or their opinion of the likelihood of exposure. All potentially exposed employees shall fully adhere to the practices and procedures identified within the "Hearing Conservation Program".

Board approved: 5/18/10



HEARING CONSERVATION PROGRAM



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HEARING CONSERVATION PROGRAM

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1.0. Purpose

- 1.1 The purpose of this program is to provide guidelines for employees exposed to occupational noise and to comply with the Cal/OSHA Occupational Noise Exposure Standard Title-8, CCR 5095 - 5100.
- 1.2 The objective of the procedure is to provide guidelines to protect the hearing of those employees exposed to noise levels in excess of an 8-hour TWA of 85 dBA, to provide a uniform method of controlling noise and conservation hearing for all district employees.

2.0. Scope

- 2.1 All WHCCD employees exposed to an 8-hour TWA of 85 dBA or greater shall be included in this program.
- 2.2 The Hearing Conservation Program consists of the following components:
 - a. Noise Level Monitoring and Evaluation
 - b. Noise Control
 - c. Audiometric Testing
 - d. Hearing Protection
 - e. Employee Training

3.0. Definitions

See Appendix A

4.0. Noise Level Monitoring and Evaluation

4.1 Noise Level Monitoring

4.1.1 Monitoring of noise exposure levels shall be conducted to accurately identify employees who are exposed to noise levels at or above 85 dBA, averaged over eight working hours; this is called an 8-hour TWA. The exposure measurement shall include all sound levels within an 80 dBA to 130 dBA range, and shall be taken during a typical work situation. Measurements shall be obtained on the A scale of a standard sound level meter at slow response.

Note: Where high worker mobility or significant variations in sound level make area monitoring generally inappropriate, representative personal sampling (dosimetry) shall be conducted.

4.1.2 Monitoring shall be repeated whenever a change in the process, equipment, or controls is suspected of increasing noise exposures to the extent that additional employees may be exposed to noise levels at or above 85 dBA as an 8-hour TWA, or when the attenuation provided by the selected hearing protective devices is rendered inadequate. This re-evaluation of work place noise shall be conducted within 60 days following the aforementioned changes.

4.1.3 Employees are entitled to observe the monitoring procedures.

4.1.4 Review of all employee complaints concerning noise shall be conducted within 60 days by a Noise Survey Consultant hired by the District to conduct noise dosimetry on affected employees. Contact is the Director of Human Resources.

4.2 Noise Exposure Evaluation

4.2.1 Upon completion of noise level monitoring of an area, noise dosimetry shall be conducted on those employees potentially exposed to levels of noise in excess of an action level of 85 dBA or greater. (Personnel noise dosimetry shall be conducted based on job description and potential for noise exposure.)

4.2.2 Noise dosimeters used shall be capable of integrating all continuous, intermittent, and impulsive sound levels from 80 decibels to 130 decibels.

4.2.3 All sound level meter reading and octave band analyses that represent employee exposure shall be maintained on file in the Human Resources office for at least 2 years in accordance with CCR 5100 d.

4.2.4 Each employee exposed at or above an 8-hour TWA of 85 dBA shall be notified of the results of the monitoring.

5.0. Noise Control

5.1 Noise control can be addressed by separating the issue into three main categories: engineering controls, administrative controls, and personal hearing protection. This section will address the first two controls.

- 5.2 The most desirable method of noise control is to apply engineering principles designed to reduce sound levels either at the source or within the hearing zone of the employee. This application can usually reduce noise to a desired level; however, economic considerations and/or operational necessities may make these controls impractical. It is WHCCD's policy to utilize engineering controls whenever feasible and practical, in order to reduce employee noise exposures.
- 5.3 Whenever engineering controls are not feasible or practical, the use of administrative controls should be explored. Administrative controls include any administrative decision that results in lower noise exposures, including complying with purchase agreements that specify maximum noise levels for machinery. Administrative controls may include rotating jobs so exposure times are reduced. This includes such measures as transferring employees from a location with high noise levels to one with a lower level in order to reduce the daily exposure below the "action level". When administrative controls are not feasible with regard to job rotation, other alternatives, including hearing protection will be utilized to reduce the daily noise exposure. It is WHCCD's practice to use administrative controls whenever practical to reduce employee noise exposure.
- 5.4 Administrative controls may be used in conjunction with engineering controls.
- 6.0. Hearing Protection
- 6.1 Hearing protective devices (HPD) shall be readily available at no cost to all employees exposed to an 8-hour time-weighted average of 85 dBA or greater, as well as all employees that enter an area or perform a task which requires hearing protection.
- 6.1.1 Two common types of HPD's are "roll-down" foam earplugs and earmuffs. Earplugs made of polyvinyl chloride or polyurethane are among the most comfortable types of hearing protection. A disadvantage of the roll-down earplugs is that they require employees to have clean hands, and thus, in some environments, may not be appropriate. Earmuffs provide as much attenuation as earplugs when worn properly; however, the effectiveness is compromised while wearing either prescription or safety glasses; another disadvantage of earmuffs is cost. The employees shall have an opportunity to select their HPDs from at least 2 different styles. Each department shall be responsible to supply the employees with the HPDs approved by the Human Resources Department.
- 6.2 Hearing protective devices must be worn by:
- All employees exposed to an 8-hour TWA of 85 dBA or greater.
 - Any employee entering an area in which hearing protection is required, where noise levels are 85 dBA or greater.
 - Any employee performing a task in which hearing protection is required, where noise levels are 85 dBA or greater.
 - All personnel exposed to impact or impulse noise are required to wear ear plugs.

6.3. WHCCD has selected the following pre approved HPDs for use within the District;

- a. Ear plugs with a noise reduction rating (NRR) of 32 or greater.
- b. Ear muffs that cap the ear and are designed for use in areas with moderate noise levels below 95 decibels.

*Cal/OSHA policy discounts the NRR effectiveness by 7 points.

6.4 HPDs shall be evaluated to ensure that they attenuate noise level exposures to less than 85 dBA in accordance with Appendix E (See attached).

7.0. Audiometric Testing

7.1 Criteria for Audiometric Testing

7.1.1 Audiometric testing monitors the sharpness or acuity of an employee's hearing over time, and provides an opportunity for employers to educate employees about their hearing and the need to protect it.

7.1.2 Any employees whose job entails exposure to an 8-hour TWA of 85 dBA shall have a baseline audiogram established. A baseline audiogram is the reference audiogram against which future audiograms are compared. Baseline audiograms shall be conducted for new hires that will work in areas with high levels of noise within 6 months. An annual audiogram shall be conducted within one year of the baseline and each year thereafter. It is important to test hearing on an annual basis in order to identify changes in hearing ability. Annual audiograms shall be routinely compared to baseline audiograms to determine whether the audiogram is accurate and to determine whether the employee has a change in hearing ability (that is, if a standard threshold shift, or STS, has occurred). An averaging method of determining STS was chosen because it diminishes the number of persons falsely identified as having STS who are later shown not to have had a change in hearing ability. An annual audiogram shall be conducted for all employees who are exposed to noise levels equal to or in excess of an 8-hour time-weighted average (TWA) sound level of 85 dBA measured on the A scale. Employees who have the baseline audiogram conducted as a new hire shall also receive an annual audiogram.

7.1.3 For employees exposed to noise levels in excess of 85dBA TWA, a work history/hearing questionnaire is required. This questionnaire shall be updated with each annual test.

7.2 Annual Hearing Test Guidelines

7.2.1 The annual audiogram shall be preceded by 14 hours without exposure to workplace noise; however, hearing protectors may be used as a substitute for this practice.

- 7.2.2 An annual work history/hearing questionnaire is required.
- 7.2.3 The audiometric examination shall be conducted by a certified audiometric technician (CAOHC), a trained physician, or a licensed or certified audiologist.
- 7.2.4 The audiometer used shall be acoustically calibrated annually in accordance with Title 8, CCR §5100, Appendix D.
- 7.2.5 If an employee has a STS when exposed to noise at or above the action level, the following items shall be reviewed:
 - a. Employees shall be notified within 21 days from the time the determination is made that their audiometric test results showed a STS.
 - b. A retest may be obtained within 30 days and the results of the retest can be considered as the annual audiogram.
 - c. Employees not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.
 - d. Employees 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.
 - e. Some employees with a STS may require a referral for further testing, if the professional determines that their test results are questionable or if they have an ear problem of a medical nature which is thought to be caused or aggravated by wearing hearing protectors. If the suspected medical problem is not thought to be related to wearing protectors, employees must be informed that they should see a physician.
 - f. A subsequent audiogram may be substituted for the original baseline audiogram if the professional supervising the program has determined that the employee's STS is persistent. This substitution will ensure that the same shift is not repeatedly identified. The professional may also decide to revise the baseline if an improvement in hearing has occurred. This will ensure that the baseline reflects actual hearing thresholds to the extent possible.

7.3 Audiometric Test Equipment

Audiometric test equipment shall conform to Title 8, CCR §5100, appendices B through D.

7.4 Post-test Guidelines

All audiograms will be reviewed by the college's consulting occupational physician or audiologist.

8.0 Training

- 8.1 Annual training is required for all employees who are exposed to noise at or above an 8-hour TWA of 85 dBA.

8.2 Information provided in the training program shall be updated to be consistent with changes in protective equipment and work process.

8.3 Each affected employee shall be informed of the following:

- a. The effects of noise on hearing.
- b. The purpose of hearing protection, the advantages, disadvantages, and attenuation of various types, as well as instruction on selection, care and use.
- c. The purpose of audiometric testing and explanation of the test procedure.

8.4 Human Resource Department is responsible for maintaining all training documentation.

9.0. Recordkeeping

9.1 Audiometric test records shall be retained for the duration of the affected employee's employment. Records shall be maintained by Human Resources Department. The record shall include:

- a. Name
- b. Job title
- c. Date of audiogram
- d. Examiner's name
- e. Make and model of audiometer
- f. Calibration date of audiometer
- g. Most recent noise exposure assessment in accordance with Title-8, CCR 5097 b.

9.2 Noise exposure monitoring records shall be maintained in accordance with Title-8, CCR 5100 d. Human Resource Department will maintain these records.

9.3 Employees who suffer a STS will be recorded on the OSHA Form 300 Injury and Illness Log as required by 29 CFR 1904.7.

10.0. Review of Hearing Conservation Program

An annual audit of the Hearing Conservation Program shall be conducted by Human Resources Department. Audit results will be made available to the affected departments.

DEFINITIONS

Action Level – An 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.

Audiologist – A professional, specializing in the study and rehabilitation of hearing, which is certified by the American Speech, Hearing and Language Association or licensed by a state board of examiners.

Baseline Audiogram – The audiogram against which future audiograms are compared.

Criterion Sound Level – The permissible exposure sound level of 90 decibels.

Decibel (dB) – Unit of measurement of sound level.

dB(A) (Decibels-A-Weighted) – A unit of measurement of sound level corrected to the A-weighted scale, as defined in ANSI S1.4-1971 (R1976), using a reference level of 20 micropascals (0.00002 Newton per square meter).

Hertz (Hz) – Unit of measurement of frequency, numerically equal to cycles per second.

Medical Pathology – A disorder or disease, for purposes of this regulation, a condition or disease affecting the ear, which should be treated by a physician specialist.

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

Representative Exposure – Measurements of an employee's noise dose or 8-hour time-weighted average sound level that the employer deems to be representative of exposures of other employees in the workplace.

Sound Level – Ten times the common logarithm of the ratio of the square of the measured A-weighted sound pressure to the square of the standard reference pressure of 20 micropascals. Unit: decibels (dB). For use with this regulation, SLOW time response, in accordance with ANSI S1.4-1971 (R1976), is required.

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

Standard Threshold Shift (STS) – An average shift in either ear of 10 dBA or more at 2,000, 3,000, and 4,000 Hz.

TRAINING EXAMINATION

NOISE AND HEARING CONSERVATION
Training Program Quiz

NAME: _____ DATE: _____

1. Employee participation in the Hearing Conservation Program is required when employee is exposed to an 8-hour TWA noise level of _____ dB.

2. Hearing damage can easily be repaired with surgery.

True or False

3. Describe a sign of hearing loss: _____

4. Name two off-work activities that may expose you to high noise levels: _____

5. Our district keeps records of noise monitoring and hearing tests.

True or False

6. A noise dosimeter is used to test an employee's hearing capability.

True or False

7. Describe one of the ways noise impacts the workplace: _____

8. Name two kinds of hearing protection devices: _____

9. How often are hearing tests conducted? _____

10. Name one of the ways management attempts to control employee noise exposure: _____

ANSWERS TO QUIZ

1. Exposed to 85 dB for an 8-hour TWA
2. False. Hearing damage cannot be cured or repaired. Hearing can only be aided once it is damaged.
3. Difficulty hearing people; noise or ringing in ears; TV or radio is too loud for others
4. Mowing the lawn; using a table saw; riding a motorcycle; attending a sporting event
5. True. These records are available for employee review upon request.
6. False. Noise dosimeters are worn by employees to determine their level of noise exposure.
7. Noise disrupts communication; causes employee fatigue; distracts or irritates; reduces morale
8. Ear plugs; ear muffs; canal caps
9. Hearing tests are conducted annually
10. Engineering or administrative controls