



Hearing Conservation Program

I. Policy

It is the policy of California State University, Fullerton to establish and maintain effective noise control and hearing conservation programs designed to eliminate or control, in so far as is reasonable and practical, overexposure of University employees to harmful noise.

When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average (TWA) of 85 decibels (dBA), the University shall obtain measurements for employees who may be exposed at or above that level. When noise cannot be controlled by engineering and administrative controls, the University shall distribute hearing protectors to all employees exposed to an 8-hour time-weighted average noise level of 85 decibels or greater. Under certain conditions, employees shall be required to use hearing protection.

The University shall provide, at no cost to employees involved in this program, a hearing program designed to provide information of satisfactory maintenance of employee hearing levels and to ascertain the effectiveness of noise control methods.

The purpose of this program is to establish a coordinated approach toward controlling excessive occupational noise exposure as directed by University policy and State law.

II. Authority

CCR Title 8, Sections 5095 to 5100; and 29 CFR 1910.95.

III. Scope

The Hearing Conservation Program affects all employees exposed to an 8-hour time-weighted average noise level of 85 dBA or greater. The potential for these noise levels have been found in the following departments:

- Carpenter Shop
- Landscape Services
- Central Plant
- Digital Print Services
- Performing Arts Wood Shop
- Building Maintenance
- Engineering Shops
- Arboretum Grounds Workers
- Auto Shop

University Police

All other employees that believe they are working in an environment above 85 dBA TWA should notify EHS.

IV. Responsibilities

A. Environmental Health and Safety (EHS)

1. Coordinate the campus' Hearing Conservation Program, providing consultation to departments according to their specific needs.
2. Conduct area or personal monitoring that is representative of the employee or department's exposure.
3. Assist departments in developing methods for noise abatement, reduction, or control.
4. Purchase personal protective devices.
5. Establish and conduct an audiometric testing program for affected employees, provide consultation and notification of exam results.
6. Maintain and make noise exposure measurements and audiometric tests available to affected employees.
7. Maintain training records.

B. Departments

1. Ensure that noise control is considered when procuring equipment, machinery, and tools.
2. Identify work areas that may overexpose employees to harmful levels of noise and notify the EHS Office.
3. Develop methods for noise abatement, reduction, or control.
4. Train or arrange training for employees covered by the Hearing Conservation Program; ensure that they read, understand and comply with all appropriate procedures.
5. Ensure that appropriate personal protective equipment is provided to affected employees; enforce the use of such devices when required; ensure that such devices are kept in good repair and maintained in a sanitary manner.
6. New employees assigned to work in areas listed above shall be sent to EHS for a baseline audiogram or personal exposure assessments within the first two weeks of their assignment.

C. Employees

1. Employees are ultimately responsible for wearing hearing protection whenever working in noisy environments.
2. Read and comply with all appropriate hearing conservation safety procedures while performing assigned duties.
3. Use common sense and good judgment at all times; the unlimited number of potential hazards that may exist or be created in the work place is sometimes unpredictable.

V. Program

A. Control of Noise Exposure

The State of California and Federal Government regulates a worker's exposure to noise. The regulations set exposure limits and details the employer's responsibilities when the limits are exceeded.

The following is a summary of the safety orders regulating exposure of workers to occupational noise. The actual regulations may be found on the Cal/OSHA website.

1. Hearing Conservation Program

When employee noise exposures equal or exceed an 8-hour TWA of 85 decibels measured on the A-scale, the University must institute a hearing conservation program. This program includes monitoring of workplace noise, an audiometric testing program for all exposed workers, and an expert evaluation of the test results.

Required audiometric testing must be conducted by a licensed audiologist, otolaryngologist, qualified physician, or trained technician. The results will be made available to employee that were tested. Annual audiograms are compared with the baseline audiogram to determine if there has been any deterioration of the worker's hearing (threshold shift). If a worker suffers a significant threshold shift, the University must fit or refit the worker with hearing protectors, train or retrain the employee in their use and make sure the hearing protection devices are used.

An audiogram is a record of hearing loss or hearing level that is measured at several frequencies—usually 500 to 6000 Hz. The interpretation of the audiogram results are based on the following criteria.

2. Hearing Protectors

- a. The University shall make hearing protectors available to all employees who are exposed to an 8-hour TWA of 85 dBA or greater.
- b. The University shall ensure hearing protectors are worn by all employees who are:
 - i. Exposed to an 8-hour TWA of 85 dBA or greater and have experienced a standard threshold shift, OR...
 - ii. Required by Cal/OSHA Title 8, Section 5097(c)(9) to wear hearing protectors because baseline audiograms have not yet been established, OR...
 - iii. Exposed to noise in excess of the limits set in Table N-1 of Cal/OSHA Title 8, Section 5096(b).

Table N-1 Permissible Noise Exposure¹

Sound Level (dBA)	Permitted Duration Per Workday		Sound Level (dBA)	Permitted Duration per Workday	
	(hours-minutes)	hours		(hours-minutes)	hours
90.....	8-0.....	8.00	103.....	1-19....	1.32
91.....	6-58.....	6.96	104.....	1-9.....	1.15
92.....	6-4.....	6.06	105.....	1-0.....	1.00
93.....	5-17.....	5.28	106.....	0-52....	0.86
94.....	4-36.....	4.60	107.....	0-46....	0.76
95.....	4-0.....	4.00	108.....	0-40....	0.66
96.....	3-29.....	3.48	109.....	0-34....	0.56
97.....	3-2.....	3.03	110.....	0-30....	0.50
98.....	2-38.....	2.63	111.....	0-26....	0.43
99.....	2-18.....	2.30	112.....	0-23....	0.38
100.....	2-0.....	2.00	113.....	0-20....	0.33
101.....	1-44.....	1.73	114.....	0-17....	0.28
102.....	1-31.....	1.52	115.....	0-15....	0.25

3. Training Program

Workers exposed to noise at or above 85 dBA for an 8-hour TWA shall participate in an annual training program. The program will include the effects of noise on hearing, the purpose and effectiveness of hearing protectors, and the purpose of audiometric testing.

4. Record keeping and Records Access.

The employer will maintain records of exposure measurements for at least 2 years and audiometric tests for the duration of the affected employee's employment.

These records must be made available to workers, former workers, worker representatives, and authorized representatives of the Division of Occupational Safety and Health.

B. Noise Survey

1. How can you tell there is a noise problem where you work? Common indications of overexposure to noise are temporary hearing loss and muffled speech, ringing in the ears after leaving the work area, or difficulty hearing normal speech in the work area.
2. If you suspect that there is a noise problem, the next step is to request a noise survey. The purpose of the survey is to measure the noise levels workers are exposed to, find the source of the noise, and determine corrective measures. If a noise survey is needed, the affected employee should inform his/her supervisor who will in turn request this service from the EHS Office.

C. Controlling Noise

If the noise survey reveals an overexposure problem, the following are alternative ways to reduce the exposure to within acceptable limits.

1. Engineering Controls

Noise levels can be controlled by making changes in the machinery, the way the machinery operates, or the design of the structure in which the machinery is housed. Engineering controls include barriers, damping, isolation, muffling, noise absorption, mechanical isolation, variations in force, pressure or driving speed, combinations of these and other means of reducing noise emissions. The way that these solutions are applied depends on the particular source of the noise and the characteristics of the noise being produced. The practical application of noise controls requires the services of an experienced and innovative engineer.

2. Administrative Controls

These may also be referred to as operational controls. These controls limit the length of time workers are exposed to noise in the work area. This involves assigning the worker to less noisy areas in the workplace so that the average of his/her daily exposure is less than the permissible exposure limit. The choice of which kind of controls to use is governed by the particular noise control problem being encountered.

3. Personal Protective Equipment

When engineering and/or administrative controls either fail to reduce noise to within required limits or are not technologically feasible, hearing protectors must be used.

When either earmuffs or ear plugs are used, sufficient variety should be available to ensure that workers can get a good fit. Protective devices should be both effective and comfortable. Sized ear plugs are made of soft, flexible materials which will conform to the shape of the wearer's ear canal. Other plugs are malleable, made of cotton, paper, plastic, and other materials. They can be thrown away after each use and are designed to fit all ears.

When ear muffs are used, make sure that the seal between the muff and the head is tight. Long hair, glasses, and other obstructions may diminish the effectiveness of this device.

Responsible Executive: Vice President for Administration and Finance

Responsible Office: Environmental Health and Safety

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