



BRIGHAM YOUNG UNIVERSITY – IDAHO

ENVIRONMENTAL, HEALTH & SAFETY

SAFETY DEPARTMENT

HEARING CONSERVATION PROGRAM

EH-016-R02

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1.0 Overview

BYU-Idaho provides hearing protection to employees, when needed, to prevent occupational exposure to noise levels that exceed or may exceed established permissible exposure limits established by the U.S. Occupational Health and Safety Administration. Administrative and/or engineering control measures, e.g., enclosures, damping with absorbents, sound insulating, job rotation, etc., must be considered and implemented, when feasible, prior to the use of hearing protection. If administrative and/or engineering controls are not feasible, appropriate hearing protection must be used.

2.0 Policy

An employee whose job function requires the use of hearing protection should receive an initial audiogram examination and training before, or soon thereafter, his or her initial assignment, and annually thereafter.

3.0 Requirements

University employees who are exposed to noise greater than 85 decibels (dBA) on the A scale and/or employees who work in areas where excessive noise levels, or the potential for excessive noise levels, may exist.

4.0 Purpose

The OSHA Occupational Noise Exposure Standard (29 CFR 1910.95) is designed to protect employees from hearing damage that may occur from exposure to excessive sound pressure levels. This standard establishes exposure levels at which certain actions must be taken. In environments where sound pressure levels may equal or exceed an 8-hour time weighted average (TWA) of 85 dBA an audiometric testing and monitoring program is made available to employees and the wearing of hearing protection is suggested. In environments with exposure levels equal to or greater than a 90 dBA over an 8-hour TWA the use of hearing protection is required. At no time should an employee be exposed to impulsive or impact noise exceeding 140 dB peak sound pressure level.

5.0 Scope

University personnel who work in noisy areas during the performance of their duties must use safe work practices, wear appropriate hearing protection while performing job functions, attend training on noise and hearing protection, report changes in workplace or "noisy" conditions to their supervisors, and comply with all provisions of the HCP.

6.0 Procedures

6.1 The employee should:

- ensure that he or she is provided with the appropriate training, medical examinations, and hearing protection if performing duties that require the use of hearing protection
- wear appropriate hearing protection while performing job functions that require its use
- report changes in workplace or hearing loss to supervisor
- comply with all provisions of this policy as it applies to employees who are exposed to noise greater than 85 decibels (dBA) on the A scale and/or employees who work in areas where excessive noise levels, or the potential for excessive noise levels, may exist.

Safety Office personnel are available to conduct departmental or individual training relative to any of the listed safety topics upon request. Please [contact the safety office](#) with your request or with any questions regarding information on the Safety Web Page.

6.2 Audiometric Testing

6.2.1 Annual testing is provided all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels. This is provided at no cost to the employee who work in the “Hearing Protection Required” designated areas. All other employees may participate in the testing at cost.

6.2.2 The annual testing is conducted by a licensed or certified audiologist, or technician who is certified by the Council of Accreditation in Occupational Hearing Conservation. A technician who administers the audiometric tests must be responsible to an audiologist, or physician. Testing procedures will follow 29 CFR 1910.95 guidelines.

6.2.3 Within 6 months of initial exposure at or above the action level, the employee should receive a baseline audiometric test. If testing is not to take place within that 6 month period, the employee shall wear hearing protection in all areas with noise potential until a baseline can be established.

6.2.4 Audiometric test are reviewed and areas of concern are communicated to the employee. Annual tests will be compared to previous testing to determine if there are any standard threshold shifts. All notifications and test results will be provided the employee, in writing, within 21 days of the test.

Copies of the test results will be maintained by the Safety Officer for not less than 5 years.

7.0 Responsibilities

7.1 Responsibilities of the University

BYU-Idaho maintains the Hearing Conservation Program (HCP) for university employees who may be exposed to excessive noise levels during the performance of their duties. The HCP is designed to achieve regulatory compliance and to provide a means for employees to be better informed about and protected from excessive noise levels and hearing loss.

7.2 Responsibilities of the University Safety Office

The Safety Office develops, implements, updates, and maintains the university's HCP, assists departments with evaluating hearing hazards, and provides guidance on suitable control measures (including, but not limited to, engineering controls, administrative guidelines, and appropriate personal protective equipment). In addition, the safety office reassesses work areas as necessary and provides employee training.

Safety Office personnel will perform an evaluation of the noise levels in suspected work areas. When measurement results indicate that any employee's noise exposure may equal or exceed an 8-hour time-weighted average (TWA) of 85 dBA, monitoring is conducted to document the exposure and determine whether the employee should be included in the HCP. Screening and additional monitoring is repeated whenever a change in production, process, equipment or controls increases the noise exposures. Employees who are exposed above an 8-hour TWA of 85 dBA are notified of the results.

7.3 Responsibilities of the Departments

Departments, shops and other university entities must identify employees who may be exposed to excessive noise levels and ensure that these employees are provided the protection required by the HCP. In addition, departments must determine whether administrative and/or engineering controls can be used in lieu of hearing-protective equipment and implement these controls when feasible; establish and maintain written standard operating procedures; ensure that only properly trained employees use hearing-protective equipment; and document and maintain all records pertaining to employee audiometric examinations and training.

Department supervisors are responsible for identifying potentially harmful noise levels at their work areas. Supervisors may suspect potentially harmful noise levels when noise in the work area routinely interferes with verbal communication; when noise routinely startles, annoys, or disrupts an employee or interferes with his or her ability to concentrate; or when it is the suspected cause of noticeable hearing loss or pain. Whenever a harmful noise level is suspected, the supervisor should notify the university Safety Office.

All employees who are exposed to a TWA of greater than 85 dBA should receive audiometric testing and an initial audiogram examination by a qualified physician, otolaryngologist, audiologist, or certified technician. This examination consists of a baseline audiogram and annual audiograms thereafter.

Before using earplugs and/or earmuffs, each employee who is exposed to noise levels above an 8-hour TWA of 85 dBA should receive training. Training will be provided by supervisors and/or Safety Office personnel to employees upon initial work assignment to areas that are identified as excessively noisy, and annually thereafter or upon request. Information provided in the annual training program is updated to be consistent with any changes in regulation, personal protective devices and work processes.

The training includes, but is not limited to, the following topics:

- the effects of noise on hearing
- the purpose of hearing protectors; the advantages, disadvantages, and attenuation of various types; and instructions on selection, fitting (hands-on), use, and care
- the purpose of audiometric testing, and an explanation of the test procedures.

7.4 Responsibilities of Employees

In addition, employees can assist the safety office by doing the following when possible:

- identify potential noisy areas of concern and contact the Safety Office to schedule an evaluation
- review the university's Hearing and Conservation Program (HCP) and ensure compliance with all requirements

- determine whether administrative and/or engineering controls can be used in lieu of protective hearing equipment and implement these controls when feasible
- establish and maintain written standard operating procedures and ensure that employees whose job functions require the use of hearing protection are trained on the use of hearing-protective equipment
- ensure that employees are provided with and use proper protective hearing equipment
- ensure that employees whose job functions require the use of hearing protection receive an initial audiogram examination and an examination annually thereafter
- document and maintain all records pertaining to employee medical examinations, training, and audiometric testing within the department.

7.5 The University Safety Office is responsible to:

- develop and implement a written hearing conservation program
- perform noise monitoring upon request from the individual departments that are concerned with noisy areas
- provide guidance on written standard operating procedures, assist departments with evaluating noise and hearing hazards, and provide guidance on suitable control measures including appropriate protective equipment
- provide training and retraining for employees as requested by individual departments
- document and maintain employee training
- Reassess work areas as necessary.
- arrange for the annual on-site audiometric testing

8.0 Training

- 8.1 BYU-Idaho has established a training program for all who are, or may be, exposed to noise at or above an 8-hour time-weighted average of 85 decibels in accordance with 29 CFR 1910.95(k).

- 8.2 The training program is repeated on an annual basis for all in the hearing conservation program. It is updated to remain current with regulatory and campus standards.
- 8.3 Training will consist of the following:
 - 8.3.1 The effects of noise on hearing.
 - 8.3.2 The purpose of hearing protection, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care.
 - 8.3.3 The purpose of audiometric testing, an explanation of the test procedures and interpretation of the test results.

9.0 Monitoring

- 9.1 Areas that are subject to 85 dBA during a spot check will undergo an extensive testing of both area and personnel to determine exposure. If it is determined that the employees are exposed to 85 dBA or greater the area is designated a “Hearing Protection Required” area and all employees must receive training and wear the proper hearing protection.
- 9.2 In areas where the noise level is greater than 90 dBA, personnel sampling will take place on an annual basis. This testing will help to determine if the exposure is the same as initial testing or if there have been changes.
- 9.3 Additional area testing when there are changes to the environment, such as new equipment, not replacement in kind.
- 9.4 Additional personnel testing will occur if there is a determination, through the annual audiometric testing, that the hearing protection is not providing the protection expected.
- 9.5 All testing records are maintained in the Safety Office for a period of not less than 5 years.

10.0 Appendixes

APPENDIX A

Permissible Noise Exposures (1)

Duration per day, hours	Sound level dBA slow response
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1 ½.....	102
1.....	105
½.....	110
¼ or less	115

Footnote(1) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C(1)/T(1) + C(2)/T(2) + \dots + C(n)/T(n)$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. Cn indicates the total time of exposure at a specified noise level, and Tn indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.