

Hearing Conservation Program
Revision 1
July 2019

1. Purpose

- 1.1. To assure that Bristol Community College personnel are protected against hazardous noise levels by evaluating noise exposures, controlling noise through engineering controls and/or hearing protective devices, determining their hearing ability through proper audiometric testing, and assure compliance with OSHA standards 29 CFR 1910.95 and 1926.52 – Occupational Noise Exposure. Typical tasks and jobs performed by Bristol Community College employees do not exceed the OSHA Action Levels for noise exposure.

2. Definitions

- 2.1. **Audiogram** – a chart, graph, or table resulting from an audiometric test showing an individual’s hearing threshold levels as a function of frequency.
- 2.2. **Baseline Audiogram** – the audiogram against which future audiograms are compared.
- 2.3. **dB(A) – decibels A weighted** – the measurement of the sound level received through an electronic measuring device that simulates the way a person actually hears.
- 2.4. **Decibel** – a unit for expressing the relative intensity of sound on a scale from zero, for the average least perceptible sound, to about 140, for the average pain level.
- 2.5. **HPD(s) – Hearing Protection Device(s)** – earplugs and / or earmuffs.
- 2.6. **Noise Dosimeter** – a sound level meter that stores sound level measurements and integrates these measurements over time, providing an average noise exposure reading for a given period of time, such as an 8-hour workday.
- 2.7. **SPL Meter – Sound Pressure Level Meter** - a device that measures the intensity of sound at a given moment. Several measurements conducted throughout the day are necessary to estimate noise exposure over a workday.
- 2.8. **STS – Standard Threshold Shift** - a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.
- 2.9. **TWA - Time Weighted Average** – the sound level at which, if constant over an 8-hour exposure, would result in the same noise dose as measured.

3. Overview of Program Applicability

- 3.1. An evaluation of the work areas and/or personnel is performed to determine if there are high noise areas. Once areas are identified as potential high noise levels, confirmation of prior noise level testing and the levels indicated must be obtained, or the noise levels must be measured to determine personnel time weighted average exposure to noise for personnel working in the high noise areas. The noise levels determine which components of this program apply to personnel working in these areas.
- 3.2. Option 1: - Below 85 dB(A)-TWA - (Below OSHA Action Level)
 - 3.2.A. No further action required because this hearing conservation program does not apply.
 - 3.2.B. This is typically the level that BRISTOL COMMUNITY COLLEGE employees perform their regular jobs / tasks at.
- 3.3. Option 2 - Between 85 dB(A)-TWA and 90 dB(A)-TWA - (Above OSHA Action Level but below OSHA Permissible Exposure Level)
 - 3.3.A. Annual hearing conservation program training required
 - 3.3.B. Make a copy of the OSHA hearing conservation standard available to all employees (this is typically done by posting a copy of the standard)
 - 3.3.C. Conduct baseline and annual audiograms
 - 3.3.D. Recommend personnel working in the high noise area use hearing protection (unless the audiogram proves a STS has occurred then HPDs are required)
- 3.4. Option 3 – Greater than 90 dB(A)-TWA - (Above OSHA Permissible Exposure Level)
 - 4.4.A. The same as Option 2 except HPDs are required to be worn by personnel in the area.
- 3.5. The hearing conservation program flowchart displays the process used to determine the need for a hearing conservation program including the need for monitoring, audiometric testing, training, HPDs, or referral of affected employees.

4. Determination of Noise Levels

4.1. There are several methods that are used for determining noise levels.

4.1.A. Representative Data

4.1.A.1. If there is representative noise monitoring data from a facility similar to the facility that the BRISTOL COMMUNITY COLLEGE employees are performing their jobs / tasks, and the work tasks, personnel activities, time of exposures, etc. are similar this may be used to determine noise levels

4.1.B. Facility Performs Noise Dosimetry Monitoring

4.1.B.1. Noise dosimeters are worn by personnel and measure the noise levels to which an individual is exposed to in an area. These are necessary in areas of high noise variability or areas of high worker movement

4.2. Hire Industrial Hygiene Consultant

4.2.A. The client or BRISTOL COMMUNITY COLLEGE may use the insurance carrier or hire an outside safety and health consulting company to perform the noise monitoring.

4.3. Sound Pressure Level Noise Data

4.3.A. A sound pressure level meter may be used to measure noise sources to determine if personnel are exposed to above 85 dB(A). The chart in OSHA 1910.95(b)(1) - Table G-16 - Permissible Noise Exposures will be used in conjunction with sound pressure level measurements to make the personnel noise exposure measurement determinations.

4.4. Frequency of Noise Monitoring

4.4.A. Noise monitoring will be repeated whenever a change in production process, equipment, or controls is suspected of significantly changing the results of previous noise surveys.

4.5. Availability of Noise Monitoring Results

4.5.A. Upon completion of a noise sampling survey, affected employees will be provided written results of the noise exposure assessment. Results will typically be posted in a conspicuous location for employees to review or will be provided directly to employees in written notification letters. Employee/Union Representatives are permitted to observe and participate in hearing conservation and exposure monitoring activities.

5. Postings

5.1. Post Copy of OSHA Standard

5.1.A. A copy of the OSHA standard on occupational noise exposure (29 CFR 1910.95) is posted in a place where personnel may readily see and review it.

5.2. Post Signs

5.2.A. Signs are posted where employees may be exposed to sound levels at or above the PEL and where the use of hearing protection is required. These warning signs will contain appropriate warning and guidance, such as "Caution – Hearing Protection Must Be Worn In This Work Area".

6. Hearing Protection Devices (HPD)

6.1. Personnel required to wear hearing protection are trained in the use and care of this personal protective equipment. Personnel are provided an opportunity to select their hearing protection from a variety of suitable hearing protection; this typically means three types of hearing protectors, including one earmuff. The hearing protection provided typically has a noise reduction rating (NRR) of 20 dB or greater.

6.1.A. Hearing protectors are issued at no cost to personnel and:

6.1.A.1. Are available to all employees who are exposed to an 85 dB(A)-TWA or greater,

6.1.A.2. Are required for employees exposed to an 85 dB(A)-TWA or greater and have not had a baseline audiogram OR have experienced a standard threshold shift, and

6.1.A.3. Are required for employees who are exposed to a 90 dB(A)-TWA or greater.

7. Engineering and Administrative Noise Control

7.1. Efforts are made to reduce the level of noise when it exceeds the PEL through the use of engineering and administrative controls.

8. Training

- 8.1. Personnel covered under this program are initially trained in:
 - 8.1.A. The health effects of noise,
 - 8.1.B. The use of hearing protection, including the advantages, disadvantages, and attenuation of various types
 - 8.1.C. The selection, fitting, use and care of hearing protection,
 - 8.1.D. The availability of information and training materials, including a copy of the OSHA Occupational Noise Exposure standard.
- 8.2. Training is provided prior to assignment to a task where the Action Level may be exceeded. Refresher training is provided annually, thereafter, while the employee continues to be employed in tasks where the Action Level may be exceeded. All training is documented in writing.

9. Record Keeping

- 9.1. Any testing conducted by a client will also be maintained by BRISTOL COMMUNITY COLLEGE. Noise exposure measurements are maintained by BRISTOL COMMUNITY COLLEGE after they have been received by the client. These records will be provided upon request, to employees, former employees, representatives designated by an individual, and OSHA officials.

10. Program Enforcement

- 10.1. Supervisors are responsible for enforcement of the Hearing Conservation Program.
- 10.2. All personnel are responsible for following the procedures in this program.