Northern Maine Community College

Hearing Conservation Program

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Hearing Conservation Program

Please note that this program has a glossary. The glossary contains the definitions for various terms used in the program. These terms are highlighted in bold print the first time they appear in the body of the program.

Policy

Northern Maine Community College shall ensure that no employee is subjected to noise that produces **sound levels** in excess of those established by the Occupational Safety and Health Administration (OSHA) without approved hearing protection.

Authority and Responsibility

Northern Maine Community College shall be responsible for:

1. Conducting all personal and/or area noise monitoring;
2. Notifying all employees exposed at or above an 8-hour **time weighted average (TWA)** of 85 **decibels** (dB) of the monitoring results;
3. Ensuring proper initial fitting of all hearing protection devices;
4. Conducting annual training for employees included in the Hearing Conservation Program;
5. Maintaining all exposure measurement records; and
6. Maintaining all audiometric test records.

Each college department or division shall be responsible for:

1. Contacting the college Safety Committee regarding any potential overexposures;
2. Implementing engineering and/or administrative controls as deemed necessary;
3. Arranging audiometric evaluations for employees;
4. Providing hearing protection to employees; and
5. Supervising and ensuring the correct use of hearing protection devices.

Employees shall be responsible for:

1. Contacting direct supervisor regarding any potential overexposures;
2. Using hearing protection as required;
3. Participating in annual **audiograms**;
4. Participating in annual training;
5. Inspecting and maintaining hearing protection devices; and
6. Seeking replacement or repair of hearing protection devices when necessary.

Sound Surveys and Exposure Monitoring

Employee and/or area monitoring shall be performed when exposure is suspect of being at or above the **action level** of an 8-hour TWA of 85 dB.

All **continuous**, **intermittent** and **impulsive/impact** sound levels from 80 dB to 130 dB shall be incorporated into the noise measurement survey.

The degree of noise reduction required shall be determined by comparing the measured levels with acceptable noise levels as presented in Table 1.

Monitoring shall be repeated whenever a change in processes, production, equipment or controls increases noise exposure to the extent that additional employees may be exposed at or above the action level or the **attenuation** provided by hearing protection devices being used by employees may be rendered inadequate.

Affected employees or their representatives shall be provided an opportunity to observe any noise measurements.

Table 1 indicates OSHA's permissible noise exposure limits.

Table 1: Permissible Noise Exposures

Duration (hours)	Sound Level dBA (Slow Response)
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 OR LESS	115

Note: Exposures to impulsive/impact noise shall not exceed 140 dB peak sound pressure level.

Control Measures

When employees are subjected to sound exceeding those levels listed in Table 1, feasible engineering and administrative controls shall be utilized as the first step in noise control. If these controls fail to reduce sound to acceptable levels, hearing protection devices shall be used. During the implementation of administrative and/or engineering controls, affected employees shall be provided with hearing protection devices and trained in accordance with this program.

Administrative Controls

Administrative controls normally involve a change in work schedules or operations which reduce noise exposures. Examples include removing the individual from the noise hazard by shifting an employee to a less noisy job once a hazardous daily noise dose has been reached.

Engineering Controls

Engineering controls shall be used when any modification or replacement of equipment, or related physical change at the noise source or along the transmission path can be altered which reduces the noise level to the employee.

Typical engineering controls may involve the following:

1. Reducing noise at the source;
2. Interrupting the noise path;
3. Reducing reverberation;
4. Reducing structure-borne vibration;
5. Employee/equipment isolation; and
6. Equipment/process substitution.

Hearing Protection Devices

Hearing protection devices shall be made available to all employees exposed to an 8-hour TWA of 85 dB or greater at no cost to the employees. Hearing protection devices shall be replaced as necessary.

Hearing protection devices shall be worn by employees required to wear personal protective equipment and by any employee who is exposed to an 8-hour TWA of 85 dB or greater, and who has not yet had a baseline audiogram or has experienced a **standard threshold shift**.

Employees shall be given the opportunity to select their hearing protection from a variety of suitable hearing protection devices.

Audiometric Evaluations

Audiometric evaluations shall be made available at no cost to all employees whose exposure equals or exceeds an 8-hour TWA of 85 dB.

Baseline Audiograms

Baseline audiograms shall be performed within six months of an employee's first measured exposure at or above the action level to compare subsequent audiograms.

Exception: Where mobile test vans are used to meet the audiometric testing obligation, the employer shall obtain a valid baseline audiogram within one year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than six months after the employee's first exposure at or above the action level, employees shall wear hearing protection devices for any period exceeding six months after first exposure until the baseline audiogram is obtained.

Prior to the audiogram, employees shall be informed to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

Annual Audiograms

Audiograms shall be performed at least annually after obtaining the baseline audiogram for each employee exposed at or above the 8-hour TWA of 85 dB. Each employee's annual audiogram shall be compared to his/her baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If the annual audiogram shows that an employee has suffered a standard threshold shift, the employee may obtain a retest within 30 days and the retest results may be considered the annual audiogram. If a comparison of the annual audiogram to the baseline indicates a standard threshold shift, the employee shall be informed of this in writing within 21 days of the determination.

All audiometric tests and equipment calibration shall be performed in accordance with the criteria established by "OSHA's Occupational Noise Exposure" Standard 29 CFR 1910.95.

Information and Training

Employees who are exposed to noise at or above an 8-hour TWA of 85 dB shall receive training on the following:

1. Effects of noise on hearing;
2. Purpose of hearing protection devices;
3. Advantages and disadvantages of hearing protection devices;
4. Attenuation of various types of hearing protection devices;
5. Instructions on selection, fitting, use and care of hearing protection devices; and

6. The purpose of audiometric testing including an explanation of the test procedure.

Northern Maine Community College shall conduct annual training for all employees included in the Hearing Conservation Program.

Copies of OSHA's "Occupational Noise Exposure" Standard 29 CFR 1910.95 are available upon request by contacting your supervisor or the college Safety Committee.

Recordkeeping

Exposure Measurements

Northern Maine Community College shall maintain an accurate record of all employee exposure measurements for a period of two years.

Audiometric Tests

Records of all employee audiometric tests shall be retained for the duration of the affected employee's employment and thirty years from the date of termination. These records shall include:

1. Name and job classification of the employee;
2. Date of the audiogram;
3. The examiner's name;
4. Date of last acoustic or exhaustive calibration of the audiometer;
5. Employee's most recent noise exposure assessment; and
6. Background sound pressure level measurements in audiometric test rooms.

All records shall be made available upon written request to the employee or designee at any time without regard to employment status.

Hearing Conservation Program
Glossary

Attenuation: The noise reducing capacity of hearing protection devices.

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.

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

Continuous Noise: Noise intervals of one second or less.

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

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

Intermittent Noise: Broadband sound pressure level exposure several times throughout the day.

Impulsive/Impact: Sharp burst of noise.

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).

Sound level meter: An instrument for the measurement of sound levels.

Standard Threshold Shift (STS): A change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000 and 4000 hertz in either ear.

Time-weighted average sound level: That sound level, which if constant over an 8-hour exposure, would result in the same noise dose as is measured.