

# BOWDOIN COLLEGE HEARING CONSERVATION PROGRAM

## **Purpose**

This document meets the requirements outlined in OSHA Title 29 CFR 1910.095 (*Occupational Noise Exposure*) for the development, implementation, and maintenance of a written hearing conservation program (HCP). The purpose of the program is to provide information, monitoring, and training to designated employees of Bowdoin College regarding noise hazards in their workplace, and in the proper use of hearing personal protective equipment (PPE).

## **Scope**

The hearing conservation program applies to designated employees (current *HCP Designated Employees List* attached) who are being or may be occupationally exposed to noise in excess of the action levels, as outlined below.

## **Program Components**

1. **Program Administrator.** The Manager of Environmental Health and Safety (EHS) will be the HCP program administrator.
2. **Hazard Determination.** Supervisors are responsible for reviewing their operations and job requirements to determine if employee hearing protection is necessary. Hazards may include levels of noise that exceed the National Institute of Occupational Safety and Health (NIOSH) standards, specifically an 8-hour time weighted average of 85 decibels [dBA], or a 50% dose equivalent. The exposure determination must include all continuous, intermittent, and/or impulsive noise within the 80-130 dB range that may occur in a typical work situation (see attached NIOSH estimates). Upon determination of a hazard, the Supervisor will provide the employee with PPE, written work practices specific to the task and location, and conduct work area surveillance during the performance of the task.
3. **Equipment Selection.** Hearing PPE must be selected to address the specific hazards identified, and is based on the degree of protection required to ensure that exposure remains within the action level:
  - Primary hearing protection (disposable ear plugs) have a Noise Reduction Rating (NRR) of 27-33 dB, and are adequate for low-level noise environments ( $\leq 85$  dBA).
  - Secondary hearing protection (ear muffs in addition to plugs) have a NRR of 19-29 dB, and are recommended for high-level noise environments ( $> 85$  dBA).

All hearing protection must meet the appropriate American National Standard Institute (ANSI) and/or National Institute for Occupational Safety and Health (NIOSH) standards, and must not impair the employee's ability to communicate or perform their task safely. The EHS Manager will coordinate the purchase of earplugs, earmuffs, and associated PPE.

4. **Employee Training.** The EHS Manager will coordinate and/or provide annual training and medical evaluations for employees who are required to use hearing protection. Records of training will be kept by the EHS Office and Human Resources for the duration of employment. Training is mandatory for any employee prior to using hearing protection, and shall include (at a minimum) the following components:
  - The nature of noise hazards, and consequences of improper protection;
  - Available engineering/administrative controls, and the need for PPE;
  - The advantages, disadvantages, and attenuation of various types of PPE;
  - Selection, fitting, use and care of hearing protection;

- Recognition of medical signs and symptoms that may result from lack of hearing protection, and the purpose and content of audiological testing; and
  - The general requirements of the OSHA standard (29 CFR 1910.095).
5. **Medical Evaluations.** Employees who are required to use hearing protection will receive baseline and annual medical evaluations to assess potential damage from occupational noise exposure. The evaluation may consist of a medical questionnaire, physical exam, and/or audiological testing. Occupational Health Associates (OHA) shall conduct the exams, and provide a written recommendation including: the employee's hearing capacity, including any limitations on work conditions; whether a standard threshold shift (STS - defined as a loss of 10 dB or more at 2,000-4,000 Hz in either ear, as compared to the baseline) has occurred; and whether any follow-up medical evaluation is necessary. The employee shall be provided with a copy of all test results and recommendations made by the medical provider. Records of all medical evaluations will be kept by the EHS Office and Human Resources for the duration of employment.

If an STS is reported for an employee, the College will:

- Notify the employee of the test results within 21-days;
- Re-test to rule out mitigating factors, and determine if the exposure is occupational;
- If non-occupational, recommend to the employee that they consult a physician; and
- If occupational, re-train the employee on the required uses of hearing protection, and perform follow-up evaluations as recommended by the provider.

Coverage of remedial methods to address an employee's hearing loss (i.e., hearing aids) will be dependant on the determination that the loss is a result of occupational exposure while employed by the College, made through medical evaluation of the baseline and current audiological test data by a qualified occupational health professional.

6. **Inspection, Cleaning, Maintenance, and Storage.** Each employee required to wear secondary hearing protection (muffs) will be issued the appropriate size and type for their sole use; employees may only wear their own muffs, and are responsible for their cleaning and maintenance. All muffs must be inspected before and after each use, with special attention to rubber or plastic parts subject to deterioration. Maintenance and repairs must be performed in accordance with the manufacturer's guidelines. Muffs must be stored to protect them from dust, sunlight, heat, extreme cold, excessive moisture, damaging chemicals or other threats to their condition. If muffs are re-issued to another employee, they must first be cleaned and disinfected.
7. **Conditional Use.** Nothing in this program is intended to infer that employees not designated as subject to training and medical evaluation requirements will not continue to use hearing protection on as-needed basis, dependant on the task involved and the determination of the degree of hazard by their Supervisor (i.e., wearing ear plugs while intermittently using loud tools or equipment for brief periods).

### **Program Review**

This written program will be audited by the EHS Manager at least annually, by reviewing the status of employee hearing protection usage, annual training, and medical evaluations. Supervisors of employees who wear hearing protection shall inform the EHS Manager of any changes in usage or needs.

### **Attachments**

*HCP Designated Employees List*

*NIOSH Estimates for Work-Related Noise and Permissible Exposures*

### HCP DESIGNATED EMPLOYEES

NAME	DEPARTMENT / JOB DESCRIPTION	HAZARD DETERMINATION
John Hersey Ron Burnette Andy Bernard Jim Diemer Charlie Blier	FM / Boiler Technician FM / Boiler Technician FM / Boiler Technician FM / Boiler Technician FM / Boiler Technician	Heating Plant Heating Plant Heating Plant Heating Plant Heating Plant
Ray Dall Mark Lavigne	FM / Mechanic FM / Mechanic	Motor Pool Motor Pool
Tim Carr Karl Perkins Nathan Bisson Robert Towle Robert Crossley Kirk Favreau George Hale Gabe Grindle Andrew Kiernan Patrick Lavigne Blinn LeBourdais Jeremy Reed Dana Favreau Armand Pomerleau Meagan Bogi Branson Ward	FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper FM / Groundskeeper	Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment Heavy equipment
Rich McKeen	FM / Environmental Controls Technician	HVAC systems
Robert Stevens	Physics / Mechanician	Machine tooling

**NIOSH ESTIMATES FOR WORK-RELATED NOISE  
AND PERMISSIBLE EXPOSURES**

<b>NOISE SOURCE</b>	<b>NOISE ESTIMATE (dB)</b>	<b>PERMISSIBLE EXPOSURE (HOURS PER DAY)</b>
Lawn Mower	90	8
Belt Sander	93	4-6
Tractor	96	3-4
Hand Drill	98	2-3
Generator	98	2-3
Impact Wrench	103	1-1½
Bulldozer	105	1
Chain Saw	110	½
Hammer Drill	114	<½
Jackhammer	119	<¼

EXPOSURE TO LISTED OR SIMILAR NOISE SOURCES IN EXCESS OF THE PERMISSIBLE TIME REQUIRES THE USE OF PPE, AND EMPLOYEE PARTICIPATION IN THE HEARING CONSERVATION PROGRAM.