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 employees 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 Associate Director of Environmental Health and Safety (EHS) will be the HCP program administrator.

2. **Hazard Determination.** Supervisors are responsible for reviewing their operations with EHS staff 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 (<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. EHS will coordinate the purchase of earplugs, earmuffs, and associated PPE.

4. **Employee Training.** EHS 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 EHS 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;
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 EHS 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 Program Administrator 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 EHS of any changes in usage or needs.

**Attachments**
*NIOSH Estimates for Work-Related Noise and Permissible Exposures*
<table>
<thead>
<tr>
<th>NOISE SOURCE</th>
<th>NOISE ESTIMATE (dB)</th>
<th>PERMISSIBLE EXPOSURE (HOURS PER DAY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawn Mower</td>
<td>90</td>
<td>8</td>
</tr>
<tr>
<td>Belt Sander</td>
<td>93</td>
<td>4-6</td>
</tr>
<tr>
<td>Tractor</td>
<td>96</td>
<td>3-4</td>
</tr>
<tr>
<td>Hand Drill</td>
<td>98</td>
<td>2-3</td>
</tr>
<tr>
<td>Generator</td>
<td>98</td>
<td>2-3</td>
</tr>
<tr>
<td>Impact Wrench</td>
<td>103</td>
<td>1-1½</td>
</tr>
<tr>
<td>Bulldozer</td>
<td>105</td>
<td>1</td>
</tr>
<tr>
<td>Chain Saw</td>
<td>110</td>
<td>½</td>
</tr>
<tr>
<td>Hammer Drill</td>
<td>114</td>
<td>&lt;½</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>119</td>
<td>&lt;¼</td>
</tr>
</tbody>
</table>

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.