

# Corporate Policy and Procedure



POLICY	<b>Hearing Conservation Program</b>
CATEGORY	Health and Safety
AUTHORITY	All Departments
RELATED POLICIES	Job Hazard Analysis Personal Protective Equipment Policy
APPROVED BY	Executive Team
EFFECTIVE DATE	2008/05/14
REVISION DATE	September 1, 2019

## Policy Statement

Guided by our corporate values, the City of Guelph shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels. Protective measures shall include the provision and use of engineering controls, work practices and personal protective equipment.

## Scope

This policy applies to all City of Guelph employees who work in areas where noise levels are at, or above the threshold limit value (TLV) of 85dBA during their shift, or who work in locations where noise surveys have indicated that noise control and/or hearing protection may be required as outlined in the Industrial Regulations.

## Purpose

To promote hearing conservation and minimize hearing loss for workers who may be exposed to levels of noise above the TLV of 85dBA .

## Definitions

### dBA

A measure of sound level in decibels using a reference sound pressure of 20 micropascals when measured on the A-weighting network of a sound level meter

### Decibel

A unit of measurement of sound pressure level that is equal to 20 times the logarithm to the base 10 of the ratio of the pressure of a sound, divided by the reference pressure of 20 micropascals

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### **Equivalent sound exposure level**

The steady sound level in dBA which, if present in a workplace for eight hours in a day, would contain the same total energy as that generated by the actual and varying sound levels to which a worker is exposed in his or her total work day.

### **Supervisor**

A person who has charge of a workplace or authority over a worker.

### **Threshold Limit Value (TLV)**

The sound pressure levels and durations of exposure to which nearly all workers may be repeatedly exposed without adverse effect. These values are developed and published by the American Conference of Governmental Industrial Hygienists (ACGIH).

### **Worker**

Means any of the following, but does not include an inmate of a correctional institution or like institution or facility who participates inside the institution or facility in a work project or rehabilitation program:

1. A person who performs work or supplies services for monetary compensation.
2. A secondary school student who performs work or supplies services for no monetary compensation under a work experience program authorized by the school board that operates the school in which the student is enrolled.
3. A person who performs work or supplies services for no monetary compensation under a program approved by a college of applied arts and technology, university, private career college or other post-secondary institution.
4. Such other persons as may be prescribed who perform work or supply services to an employer for no monetary compensation;

### **Workplace**

Any land, premises, location or thing at, upon, in or near which a worker works

## **Procedure**

### **Roles & Responsibilities**

#### **Executive Team**

- Ensure that service area leaders are aware of the content of this policy, and support the successful implementation of the requirements as laid down.

#### **Managers/Supervisors**

- Ensure workplaces with noise levels that may be at or above the TLV of 85dBA, are identified and assessed, and appropriate measures for engineering controls, administrative controls and/or personal protective equipment are implemented.
- Ensure workers use the controls implemented and wear hearing protection issued, as required.

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- Ensure required hearing protection is available as needed.
  - Ensure workers who use hearing protection are trained in its use, and are encouraged to participate in audiometric testing programs offered.

### **Workers**

- Use the provided hearing protection as required.
- Personal electronic listening devices, such as cell phones, MP3 players, etc., are not to be used while performing work duties.
- Use, clean, disinfect, inspect and store the provided hearing protection as instructed.
- Report all hearing protection problems or noise related concerns to their immediate Manager/Supervisor as soon as possible.

### **Health and Safety**

- Assist in identifying the need for noise abatement controls or hearing protection.
- Assist in the selection of appropriate hearing protection.
- Facilitate audiometric testing.
- Consult with the Joint Health & Safety Committee (JHSC) concerning workplace noise testing strategies.
- Inform the JHSC when testing is to be conducted.
- Provide the JHSC with the results of all noise surveys and testing results.

### **Corporate Procedure**

All departments containing areas of the workplace where the potential for exposure to noise levels above the TLV of 85dBA exists, shall ensure the measures outlined below are followed:

#### **1. Identify areas with noise hazards**

- i. The supervisor shall identify areas where noise may exceed the TLV. Preliminary ways to identify areas with the potential for exceeding the TLV include but are not limited to:
  - Conducting a walk-through survey.
  - Seeking employee and Joint Health & Safety Committee input.
  - Asking colleagues in similar workplaces to share insights.
  - Requesting assistance from Health & Safety to measure noise levels.
- ii. Once noise sources have been identified, create an action plan that identifies the following:
  - Workplace layout and locations of noise producing activities or equipment
  - Number of workers in those areas
  - Noise controls measures already in place
  - Potential additional controls

#### **2. Assess the noise levels to which workers are exposed**

- i. The supervisor shall ensure areas of concerns are evaluated and tested in accordance to CSA Standard Z107.56-18, "Measurement of Noise Exposure".
- ii. Any measurements taken of sound levels in the workplace in order to determine what protective measures are appropriate shall be done without regards to use of personal protective equipment.

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- iii. Assessments can be coordinated with the assistance of the Health and Safety Specialist.
  - iv. Information shall be provided to a Joint Health & Safety Committee member concerning testing strategies and an opportunity to be present at the beginning of the testing.

### **3. Implement a control program**

- For the purchases of new equipment, request that manufacturer specifications on the equipment be less than 85 dBA,  $L_{ex, 8}$  (i.e. noise exposure should not exceed 85 dBA averaged over an 8-hour period).
- For existing equipment, workers should not be exposed to a sound level greater than an equivalent sound exposure level of 85 dBA,  $L_{ex, 8}$ . If sound levels are found to exceed this level, then the following components of a control program should be investigated in the priority as ordered below:
  - i. Engineering Controls**
    - Modifying equipment to reduce noise output.
    - Absorbing the noise before it spreads.
    - Changing the frequency of noise.
  - ii. Administrative controls or procedures**
    - If noise cannot be reduced by engineering controls, then consider administrative controls to modify how work is performed. For example:
      - Reduce exposure by limiting time spent in noisy environments,
      - Minimize workers present during noisy operations,
      - Change the way in which work is performed,
      - Routine maintenance of equipment,
      - Rotating workers, etc.
  - iii. Personal protective equipment (PPE)**
    - Workers shall wear/use personal protective equipment appropriate in the circumstances to protect them from potential exposure to sound levels greater than 85 dBA,  $L_{ex, 8}$  **only** if engineering or administrative controls to reduce the noise levels to within acceptable limits:
      - Are not in existence or are not obtainable;
      - Are not reasonable or practical to adopt, install or provide because of the duration or frequency of the exposures or because of the nature of the process, operation or work;
      - Are rendered ineffective because of a temporary breakdown of such controls; or
      - Are ineffective to prevent, control or limit exposure because of an emergency.
    - The supervisor shall investigate and document the reason(s) why engineering or administrative controls are not reasonable or practical, if personal protective equipment is to be used.
    - A clearly visible warning sign shall be posted at every approach to an area in the workplace where the sound level regularly exceeds or has the potential to exceed 85 dBA.

### **4. Monitor noise levels regularly**

- Monitoring employee exposure to noise levels shall be done at least annually to indicate deficiencies in engineering and administrative controls and identify problems before hearing loss occurs.
- Noise level surveys shall be done at least every two years, or if equipment, process or facilities have changed, or whenever a new process or piece of equipment is introduced.

Workers shall not be exposed to more than 100% of the permissible daily noise dose without the use of hearing protection.

### **Table of Equivalent Noise Exposures**

<b>Steady Sound Level (dBA)</b>	<b>Duration</b>
82	16 hours
85	8 hours
88	4 hours
91	2 hours
94	1 hour
97	30 minutes
100	15 minutes
103	7.5 minutes
106	3.75 minutes
109	1.88 minutes

### **5. Perform audiometric testing**

- Workers in jobs requiring hearing protection, shall be provided with audiometric testing.
- Testing will be arranged by Health and Safety at the expense of the requesting department.
- Audiometric tests shall be conducted bi-annually by qualified and trained technicians in order to identify any changes in an individuals' hearing so corrective action can be taken, and the effectiveness of the Hearing Conservation Program can be monitored.
- Audiometric tests will be conducted confidentially by the service provider who is performing the tests.
- Individuals will be advised of their test results by letter.
- Based on the findings, employee(s) requiring follow-up shall be notified by the service provider.
- Generic summary reports of test results will be forward to the Health and Safety Specialist and Joint Health & Safety Committee for review to monitor the effectiveness of the Hearing Conservation Program and the need to implement additional controls.

### **Training**

For workers exposed to high noise levels, the supervisor shall ensure they are trained on the following subjects bi-annually:

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- Reasons for audiometric testing, plus the confidentiality of testing results.
  - Control measure in place to reduce noise exposure.
  - Hearing protection – types; use, care, and fit.
  - Relevant legislation.

## Reference Documents

Occupational Health and Safety Act, R.S.O. 1990, c. O.1

R.R.O. 1990, Reg. 851: INDUSTRIAL ESTABLISHMENTS

ONTARIO REGULATION 381/15

CSA Z94.2-14 Hearing Protection Devices – Performance, Selection, Care and Use

CSA Z107.56-18, "Measurement of Noise Exposure".

CSA Z107.58-15 Noise Emission Declarations for Machinery

## Revision History

Document Owner	Issue / Revised Date	Reason For Changes
Health & Safety	May 14, 2008	Initial draft
Health & Safety	November 1, 2018	Revision and update of entire document
Health & Safety	September 1, 2019	Added O. Reg 381/15 to list of reference documents.