



Complete Program Title: <b>Head Protection Program</b>	Risk Management Manual (RMM) Number: <b>313</b>
Approved by:  <b>Vice-President, Administration</b>  <b>President and Vice-Chancellor</b>	Date of Most Recent Approval: <b>April 2013</b>
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<b>DISCLAIMER:</b> <i>If there is a discrepancy between this electronic program and the written copy held by the program owner, the written copy prevails.</i>	

## 1 Purpose

- 1.1 To reduce the potential for head injury and to ensure compliance with the Occupational Health and Safety Act and regulations and adherence to applicable codes and standards.
- 1.2 To provide guidance for the selection of suitable head protection.

## 2 Scope

- 2.1 All individuals (faculty, staff, students, visitors and contractors) in danger of head injury while performing work at McMaster University, including those associated with research or study.

## 3 Related Documents

- 3.1 Occupational Health and Safety Act, R.S.O. 1990, Industrial Establishment Regulations O. Reg. 851 and Construction Projects O Reg.213.
- 3.2 CSA Z94.1 - 05 Industrial Protective Headwear-Performance, Selection, Care and Use.
- 3.3 McMaster University Risk Management Manual #100 Workplace and Environmental Health and Safety Policy.

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- 3.4 McMaster University Risk Management Manual #101 McMaster University Risk Management System.
  - 3.5 McMaster University Risk Management Manual #300 Safety Orientation and Training Program.
  - 3.6 McMaster University Risk Management Manual #801 Field Trips & Elective Planning and Approval Program.
  - 3.7 McMaster University Risk Management Manual #324 Job Hazard Analysis Program.

#### 4 Definitions

- 4.1 **Class G Headwear (General Use)** – a class of headwear that is intended to provide the user with protection against impact and penetration. This headwear is nonconducting; it must pass a dielectric-strength test (less than 2,000 V). This class of headwear is intended to provide protection against electric shock following accidental contact between the headwear and live electrical apparatus
- 4.2 **Class E Headwear (Electrical Trades)** – a class of headwear that is intended to provide the user with protection against impact and penetration. This headwear is nonconducting; it must pass the dielectric-strength test specified for Class E headwear (less than 20, 000 V)
- 4.3 **Class C Headwear (Conducting)** – a class of headwear that is intended to provide the user with protection against impact and penetration only.
- 4.4 **Headwear accessories** – chin straps, hearing protectors, winter liners and other accessories may affect the original degree of protection. (Consult the supplier about the suitability of such accessories).
- 4.5 **Industrial Protective Headwear** – a device to provide protection to the head against impact, penetration, or electrical shock, or any combination thereof, and that is held in place by a suitable suspension.
- 4.6 **Shell** – the material that provides the general outer form of the protective headwear and whose primary purpose is to distribute the impact load and to resist penetration.
- 4.7 **Suspension** – the part of the protective headwear that holds it in place on the head during normal use. It may be comprised of a head, crown straps and tabs.
- 4.8 **Supervisor** – person who has charge of a workplace or authority over a worker
- 4.9 **Worker** – a person who performs work or supplies services for monetary compensation.
- 4.10 Acronyms:
  - CJHSC** – Central Joint Health and Safety Committee
  - CSA** – Canadian Standards Association
  - EOHSS** – Environmental & Occupational Health Support Services
  - FHSc safety office** – Faculty of Health Science Safety Office

**JHSC** – Joint Health and Safety Committee

**OHSA** – Occupational Health and Safety Act

**RMM** – Risk Management Manual

**RMSG** – Risk Management Support Group

## **5 Responsibilities**

### **5.1 Role of Senior Managers ( Deans, Chairs, Directors):**

Senior Managers shall:

- provide the direction and resources necessary to support the Head Protection Program

### **5.2 Role of Supervisors (Academic and Administrative):**

Supervisors shall:

- determine the need for head protection in tasks assigned to individuals under their supervision as per RMM# 324;
- determine the type of head protection that should be worn by individuals while performing a task under their supervision;
- supply or ensure that appropriate protective headwear is available for all who must be so equipped;
- ensure that proper head protection is being worn while hazardous tasks are being performed;
- provide training including instruction regarding inspection and maintenance of protective headwear; and
- post appropriate signage in areas where head protection is required..

### **5.3 Role of Individuals (Faculty, Staff, Students and Volunteers):**

Individuals shall:

- wear the head protection prescribed by the supervisor as being appropriate for the involved tasks; and
- follow the prescribed guidelines for the use and care of approved safety headwear.

### **5.4 Environmental and Occupational Health Support Services and Faculty of Health Science Safety Office:**

EOHSS and FHSc safety office shall:

- monitor safety standards for head protection;
- provide advice to supervisors regarding the type of head protection when required; and

- update the Head Protection Program as required.

#### 5.5 **Role of Risk Management Support Group:**

The RMSG shall:

- provide advice and direction on the need for and type of protective headwear required in the workplace; and

#### 5.6 **Role of Contractors:**

Contractors shall:

- work in compliance with the OHSA and McMaster University Safety Policy and Programs; and
- post designated construction sites as areas where head protection is required.

#### 5.7 **Role of Joint Health and Safety Committees:**

JHSCs shall:

- review the effectiveness of the Head Protection Program in posted areas and within assigned work groups as part of the workplace inspection process.

#### 5.8 **Role of Central Joint Health and Safety Committee:**

The CJHSC shall:

- review the Head Protection Program on a scheduled basis.

### **6 Procedural Guidelines**

#### 6.1 **Assigning Head Protection Requirements for Work Areas and Activities**

6.1.1 Supervisors will set the standards for head protection based on a risk assessment of the potential exposure to head injury associated with assigned tasks (See Appendix B and RMM# 324).

6.1.2 EOHSS, FHSc safety office or JHSC should be consulted in all instances where a question arises as to the need for such protection.

#### 6.2 **Selecting Head Protection**

6.2.1 The supervisor and the individual involved, along with EOHSS if needed, shall assess the type of head protection required. (See CSA Types of Protection for Various Hazards Appendix B).

6.2.2 Consider the following risks:

- Impact from flying objects (grinding operations, abrasive blasting etc);
- Head contact with overhanging or overhead objects;
- Impact from falling objects;
- Head contact with live electrical circuits; and
- Hair entanglement with rotating equipment that requires the use of hair restraints.

6.2.3 McMaster University faculty, staff, students and visitors shall use only CSA approved head protection.

6.2.4 The department responsible for the individuals requiring such protection shall provide approved head protection.

### 6.3 Care and Use of Protective Headwear

6.3.1 The user before each use shall check the shell and suspension of protective headwear. If the shell or linings are found to have a crack, dent or penetration, or if the suspension has torn or broken threads, the protective headwear should either be discarded or the particular part replaced with an identical part from the same manufacturer.

6.3.2 Any protective headwear that has received any severe blow shall be taken out of service.

6.3.3 Protective headwear shall not be painted without prior consultation and consent from the manufacturer.

6.3.4 Protective headwear shall be cleaned on a regular basis, according to the manufacturer's instructions.

6.3.5 Chinstraps used with Class E protective headwear should not be drawn over the brim or peak because the strap if in contact with a live electrical conductor, may allow current to flow from the conductor to the user of the protective headwear.

6.3.6 Retention systems fitted to the protective headwear shall be fastened and under tension at all times to ensure the security of the system.

6.3.7 The addition of accessories to protective headwear may adversely affect the original degree of protection, and must be confirmed as being appropriate by the supplier of the protective headwear.

6.3.8 Winter liners used in Class G and Class E protective headwear shall be flame resistant.

6.3.9 To obtain optimum levels of protection against electrical shock, the protective headwear must be clean and dry. Protective headwear that is wet or contaminated with oil, grease or other conducting chemicals, or that is fitted with inappropriate accessories may suffer a significant reduction in its protection against electrical shock.

6.3.10 Inspect expiry date.

### 6.4 Posting Head Protection Areas

6.4.1 Designated head protection areas e.g. Construction sites, work sites where explosive actuated tools are used, work sites with overhead conveyors etc. must be posted (See Sign Appendix C)

## 7 Records

7.1 Supervisors shall maintain up to date records of all individuals covered under the head protection program.

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## Appendix A

### OHSA, R.S.O. 1990,

#### Sections:

25. (1) Duties of employers-An employer shall ensure that;
- a) the equipment, materials and protective devices as prescribed are provided;
  - b) the equipment, materials and protective devices provided by the employer are maintained in good condition;
  - c) the measures and procedures prescribed are carried out in the workplace;
  - d) the equipment, materials and protective devices provided by the employer are use as prescribed and
  - e) a building, structure, or any part thereof, or any other part of a workplace, whether temporary or permanent, is capable of supporting any loads that may be applied to it,
    - (i) as determined by the applicable design requirements established under the version of the *Building Code* that was in force at the time of its construction,
    - (ii) in accordance with such other requirements as may be prescribed, or
    - (iii) in accordance with good engineering practices, if subclauses (i) and (ii) do not apply.

7.2

#### Requirements of O. Reg. 851, 1990, Industrial Establishments:

##### Sections:

79. A worker required to wear or use any protective clothing; equipment or device shall be instructed and trained in its care and use before wearing the protective clothing, equipment or device.
80. A worker exposed to the hazard of head injury shall wear head protection appropriate in the circumstances.
- 83 (1) Long hair shall be suitably confined to prevent entanglement with any rotating shaft, spindle, gear, belt or other source of entanglement.
- (2) Jewelry or clothing that is loose or dangling or rings shall not be worn near any rotating shaft, spindle, gear, belt or other source of entanglement.
137. Protective clothing or other safety device that has been worn or used next to the skin shall be cleaned and disinfected prior to being worn by another worker.

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**Requirements of O. Reg. 213, 1991, General Construction:**

**Sections:**

- 21(1) A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed.
- (2) A worker's employer shall require the worker to comply with subsection (1).
- (3) A worker required to wear protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it.
- 22(1) Every worker shall wear protective headwear at all times when on a project.
- (2) Protective head wear shall be a safety hat that,
  - a) consists of a shell and suspension that is adequate to protect a person's head against impact and against flying or falling small objects, and;
  - b) has a shell that can withstand a dielectric strength test at 20,000 volts phase to ground.

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**Appendix B**

**CSA Standard CSA-94.1-05 s. 4, Protective Headwear Classifications:**

<b>Class and Usage</b>	<b>Protection Offered Against</b>
<b>G</b> (general usage)	Side and crown impact and penetration protection, and protection against electric shock < 2000 V
<b>E</b> (electrical trades)	Side and crown impact and penetration protection, and protection against electric shock < 20,000 V
<b>C</b> (conducting head wear)	Impact and penetration protection only, no electric shock protection.