

**Introduction:** This standard outlines basic precautions and work practices to minimize exposure to noise and prevent noise induced hearing loss.

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- Standard:**
1. Noise Measurement Surveys  
Where there is reason to believe that an employee is exposed to noise in excess of 80 dBA (decibels measured using the “A” weighting scale) a noise survey will be done to measure the sound pressure level in the area and to determine the employee’s actual exposure to noise. The noise measurements shall be repeated any time there is reason to believe the noise level has changed significantly.
  2. Baseline Hearing Testing  
Where an employee is hired to a position where exposure to noise may exceed 80 dBA a baseline audiogram shall be done. This test should be completed not more than 6 months after starting the new position.
  3. Designing for Noise Control  
New equipment and facilities shall be **purchased or** designed, to the extent **practicable**, such that the ambient sound level does not exceed 85 dBA in employee areas. The purchase specifications for all new or replacement equipment shall include maximum acceptable noise criteria.
  4. Noise Control Measures  
Where an employee is or is likely to be exposed to noise exceeding that specified in Section 30(1) of Regulation 91-191, steps shall be taken to reduce the noise below the applicable exposure limit(s). **Where practical** engineering controls **shall be used** to reduce the sound output of the equipment. Other **possible** control measures include noise reducing enclosures on equipment, noise reducing operator’s booths, reducing the duration of exposure or the use of hearing protection.
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5. Warning Signs

Where the sound level exceeds 85 dBA in an area, signs shall be posted indicating the range of noise levels and warning of the noise exposure hazard. **In areas with multiple noise sources the signs may be posted at all of the entrances to all areas with noise above 85 dBA and not at the individual noise sources. In addition signs should be posted** at any area where the noise level exceeds 100 dBA, as these areas may require enhanced hearing protection.

6. Hearing Protection

Hearing protection shall be worn at all times in areas where the sound level exceeds 85 dBA, with the exception of employees operating vehicles or other equipment where the use of hearing protection is not permitted. Where employees may be exposed to hazardous noise and hearing protection may not be used, the exposure to noise shall be controlled by limiting the duration of exposure to acceptable limits, as shown in Table 1, or by other effective controls.

Table 1

<u>Sound Level (dBA)</u>	<u>Maximum Exposure Time</u>
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	4 minutes
109	2 minutes
112	1 minutes
115	no unprotected exposure

Where the noise level exceeds 100dBA extra care is necessary to match hearing protectors to the job. Consult the Industrial Hygiene Department for assistance in selecting appropriate hearing protectors.

Where hearing protection is required to be worn a choice of hearing protection shall be made available. At least two styles of ear plug and one muff style hearing protector **shall be made** available to allow the employee to select the most comfortable style. Semi-aural or earcap devices, resembling

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miniature headphones are useful for employees who are in and out of noisy areas frequently. Reusable hearing protectors shall be inspected for signs of damage or wear before each use and repaired or replaced as necessary.

Adequate supplies of hearing protectors shall be available at all times and shall be conveniently available. Specialized hearing protection shall be made available as required for such needs as communication headsets for noisy areas or earplugs in smaller sizes.

All employees who may be exposed to noise above 85 dBA, shall be trained on the characteristics of noise, on the hazards of noise exposure with emphasis on noise induced hearing loss and its effects on lifestyle, and on the proper selection, care and use of hearing protectors.

#### 7. Selection of Hearing Protection

The selection of appropriate hearing protectors is a complex procedure that must take into account many factors including:

- the sound pressure level and frequency distribution of the noise
- the attenuation provided by the hearing protector
- user comfort and acceptance
- medical conditions that may prevent the use of one or more styles
- the need to communicate verbally or to recognize sounds and alerts in the workplace
- the effect of any pre-existing hearing loss.

The hearing protector with the highest noise attenuation may not be the best choice. Contact Health and Safety for assistance when selecting hearing protection.

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# Health & Safety Standards



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Title:  
**Hearing Loss Prevention and Noise**

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**Reference/Appendix:**

1. General Regulation Under the Occupational Health and Safety Act, New Brunswick Regulation 91-191, Sections 29 through 33.
2. Hearing Conservation Programs, Practical Guidelines for Success, Julia D. Royster and Larry H. Royster, (Lewis Publishers, Michigan, 1990.)
3. **The Noise Manual, Revised Fifth Edition, E.H. Berger, L.H. Royster, J.D. Royster, D.P. Driscoll, M. Layne, editors. (American Industrial Hygiene Association, Fairfax, Va, 2003.)**
4. CSA Z107.56-06 (reaffirmed 2011). Procedures for the Measurement of Occupational Noise Exposure.

A handwritten signature in black ink, appearing to read "Gary S. Boyd", is positioned above a horizontal line.

Gary S. Boyd, Director

Health, Safety & Security Services

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Revision Number	Revised Section(s)	Revision Summary	Revised By:	Effective Date:

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