

Northland Community and Technical College

HEARING CONSERVATION COMPLIANCE PLAN

June 1, 2017

**Safety Officer Cory Feller
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1.0 HEARING CONSERVATION

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1.1 PURPOSE

OSHA regulation 29 CFR 1910.95 Occupational Noise Exposure; Hearing Conservation Amendment, require all employees exposed to time-weighted average (TWA) noise levels of 85 dBA or greater during an eight-hour work day be included in a hearing conservation program. Noise levels within client owned facilities shall be determined by means of a noise-monitoring program. This noise survey shall be conducted by MacNeil Environmental, Inc. and shall identify the noise levels to which employees are exposed in the different work areas within the facilities. Monitoring shall be repeated whenever there is a change in process, equipment, or controls.

Areas or processes suspect as hazardous are identified in the Facility Application section of the Hearing Conservation Program, as found in the College's Compliance Manual. Entries listed on these pages identify POTENTIAL noise hazardous areas or processes that merit further evaluation.

Upon approval through the College, MacNeil Environmental, Inc. will conduct area sound level monitoring and/or personal noise dosimetry to accurately quantify exposure potentials. Monitoring will be completed in accordance with OSHA 29 CFR 1910.95 directives. Survey reports will be filed in the Facility Application section of the Hearing Conservation Program, as found in the College's Compliance Manual.

The program shall be developed and implemented based, in part, on these recommendations.

As per the Safety Officer Cory Feller, annual testing will be conducted in Auto Body, Auto Services, Welding, Music, Grounds Keeping/General Maintenance, and Criminal Justice Departments at the Thief River Falls campus. Annual testing will also be conducted at the East Grand Forks campus in the Welding, Carpentry, Plumbing, HVAC, Grounds Keeping/General Maintenance, and Electrical Sciences Departments. Annual testing will be conducted by MEI and as per request.

1.2 TRAINING

All employees of this facility who are exposed to noise levels at or above 85 dBA shall receive hearing conservation training. For new hires this training shall take place during the orientation session for new employees. Training topics presented to all employees will include the effects of noise on hearing; the purpose of hearing protectors, including the types available and the relative advantage/disadvantage of each; the proper selection, fitting, use, and care of hearing protectors; and the purpose of audiometric testing.

Currently there are two individuals enrolled in the Hearing Conservation Program. Jesse Atkins and Shannon Boen work in the Grounds Keeping/General Maintenance department, where they are often exposed to noise levels exceeding OSHA standards, so they have annual Audiograms set up by Safety Officer Cory Feller, at the local healthcare provider.

1.3 TESTING

Within one year of an employee's hire date, a hearing test shall be obtained to establish a valid baseline audiogram against which subsequent audiograms will be compared. After obtaining the baseline audiograms, all employees shall be retested annually to obtain new audiograms. The most recent audiogram will be compared to the employee's baseline audiogram to determine if a standard threshold shift (STS) has occurred. (A STS is defined as a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, 4000, Hz in either ear).

If a standard threshold shift has occurred, the employee shall be informed of the change in writing within twenty-one days of the determination. If a STS is confirmed, the employee shall be refitted and retrained in the use of hearing protection, and shall be provided hearing protection that offers greater attenuation if necessary. The employee also shall be required to wear hearing protection in all work areas of 85 dBA TWA. If it is suspected that the hearing protector is causing or aggravating a medically related ear condition, the employee shall be informed of the need for an otological (medical) examination.

All other employees shall be informed of the results of their hearing tests within thirty days of the facility receiving the results.

1.4 HEARING PROTECTION

Upon the recommendation of the College & safety consultant, all employees working in areas known to have excess noise are required to wear hearing protectors during working hours.

At least three types of hearing protectors shall be available to all employees. Choice of protection will be made according to individual comfort, ease of use, and attenuation. All

hearing protectors shall attenuate to or below an eight-hour time-weighted average of 85 dBA, as required by the OSHA standard.

It is the responsibility of each supervisor to make certain all of the employees whom they supervise wear hearing protection, and that the hearing protection is properly fitted at all times.

1.5 MISCELLANEOUS

A copy of OSHA's Occupational Noise Exposure Standard and Hearing Conservation Amendment can be found at the OSHA web-site (www.osha.gov). A copy shall also be posted on the employee bulletin board.

Hearing Conservation Information

- Permissible Exposure Limit (PEL) = 90 dBA for an 8 hour TWA = 100% dose
- 15 minute excursion limit is 115 dBA.
- The ceiling limit for any exposure is 140 dBA.
- 85 dBA TWA (or 50% noise dose) is the action level requiring a Hearing Conservation Program – (it is an ACGIH guideline – lower than OSHA's PEL of 90 dBA).
- The 85 dBA action level requires employers to use engineering controls, administrative controls or personal protective equipment.
- OSHA requires that engineering controls reduce noise to 90dBA when feasible.
- Employers must make hearing protection available to employees when the noise level is at or above 85 dBA. Employees exposed to a TWA less than 90 dBA are *not* required to use this protection unless a permanent significant hearing loss has been found/identified.
- Hearing protection must be worn by all workers exposed to 90 dBA or more.

SOUND PRESSURE LEVEL VS. REFERENCE DURATION

SPL (dBA)	Time Allowed
89	> 8 hrs
90	8 hrs
91	6.96 hrs
92	6.06 hrs
93	5.27 hrs
94	4.59 hrs
95	4 hrs
96	3.48 hrs
97	3.03 hrs
98	2.29 hrs
99	2.29 hrs
100	2 hrs
101	1.74 hrs
102	1.51 hrs
103	1.32 hrs
104	1.14 hrs
105	1 hr
106	0.86 hr
107	0.75 hr
108	0.65 hr
109	0.56 hr
110	0.5 hr
111	0.43 hr
112	0.38 hr
113	0.33 hr
114	0.28 hr

SPL (dBA)	Time Allowed
115	0.25 hr
116	0.21 hr
117	0.18 hr
118	0.16 hr
119	0.14 hr
120	0.12 hr
121	0.10 hr
122	5.6 min.
123	4.9 min.
124	4.3 min.
125	3.7 min.
126	3.2 min.
127	2.8 min.
128	2.4 min.
129	2.1 min.
130	1.8 min.
131	1.6 min.
132	1.4 min.
133	1.2 min.
134	1 min.
135	56 sec.
136	48 sec.
137	42 sec.
138	37 sec.
139	32 sec.
140	28 sec

Note: The SPL (sound pressure level) vs. Reference Duration Chart printed above is based on 90 dBA TWA = 100% dose, with a 5 dB exchange rate.

