

MOUNTAIN BROOK FIRE DEPARTMENT

POLICY NO. 106.12

VOLUME: I

SUBJECT: Hearing Conservation Program

SIGNED: _____
ROBERT W. EZEKIEL, FIRE CHIEF

7/7/2009
DATE

SCOPE AND PURPOSE: The Mountain Brook Fire Department Hearing Conservation Program (HCP) has been developed as a formal tool to aid in the prevention of occupational hearing loss for all fire department employees. The permissible exposure level for the Mountain Brook Fire Department Hearing Conservation Program is 85 decibels A-weighted (dBA). Employees exposed to sounds at or above 85 decibels as an 8 hour time-weighted average are required to wear hearing protection and be governed by a hearing conservation program.

The HCP shall apply to all department personnel who respond to fires, EMS and rescue calls on a regular basis. The work tasks and associated equipment utilized during training, and on fire, emergency medical, and rescue scenes have the potential to expose employees to noise levels at or above 85 decibels.

DEFINITIONS:

Annual Audiometric Test: Audiometric test given to employees on an annual basis and used to compare/contrast with the baseline audiometric test.

Baseline Audiometric Test: Audiometric test given at beginning of employment which all other audiometric tests will be compared.

Standard Threshold Shift (STS): Average shift in either ear of 10 dB or more at 2000, 3000, and 4000 hertz as measured by calculating the difference between annual and baseline audiometric testing and allowing for age as a contributing factor.

EXPOSURE IDENTIFICATION:

Identification of Work Areas: Fire Department personnel shall wear hearing protection whenever exposed to noise at or above 85 decibels.

The following work areas have been identified as requiring hearing protection:

- ▶ Riding in fire apparatus on emergency responses. Depending upon actual testing, some apparatus may require hearing protection during normal driving conditions. The department safety officer will perform sound level testing on each fire apparatus to make this determination.
- ▶ All training exercises which generate noise from sledgehammers, saws, extrication equipment or other equipment generating noise in excess of 85 decibels.

MOUNTAIN BROOK FIRE DEPARTMENT

POLICY NO. 106.12 VOLUME: I PAGE: 2 of 5

- ▶ Testing and cranking of motorized equipment/tools as part of maintenance
- ▶ While performing pump operations at the pump panel of pumping apparatus and the Ladder Truck and operations of the Ladder Truck with the aerial device in service.

Identification of Equipment: Fire Department personnel are required to wear hearing protection when operating equipment that produces noise in excess of 85 decibels **except in situations where the use of such personal protective equipment would create an additional hazard to the user (See Note 1)**. Identified equipment includes but is not limited to the following:

- ▶ Apparatus Pumps
- ▶ Mechanized extrication equipment
- ▶ All motorized saws
- ▶ Air Chisels

Where equipment operators are required to maintain radio communications while operating fire apparatus, headsets that provide noise attenuation as well as radio communications shall be provided and used.

Note 1: First line supervisors are expected to make sure that the appropriate hearing protection is being worn by employees in environments that may produce noise at the 85 decibel level. It is recognized that wearing hearing protection may present more of a hazard to an employee and/or his co-workers under certain circumstances. For example, face to face voice communications at the emergency scene could take precedent over wearing hearing protection if the lack of said communication would jeopardize or further imperil the safety of the employee and/or his/her co-workers. The immediate supervisor will be responsible for making this decision and communicating it to his/her subordinates.

AUDIOMETRIC TESTING:

Baseline Audiometric Exam: As part of the pre-employment medical examination, an initial baseline audiometric examination shall be performed and the records of said test shall be kept as part of the permanent medical records for the employee.

Annual Audiometric Testing: Annual audiometric tests will be conducted for all personnel within the department.

Note 2: All employees should avoid exposure to loud levels of noise for at least fourteen (14) hours prior to the audiometric exam.

Annual audiometric test results shall be measured against the baseline audiometric results to determine if changes in hearing have occurred in the 2000, 3000, and 4000 Hz range in each ear.

MOUNTAIN BROOK FIRE DEPARTMENT

POLICY NO. 106.12 **VOLUME:** I **PAGE:** 3 of 5

RECORDS:

Employees with standard threshold shifts (STS) - (determined by audiologist via annual audiometric test) averaged over the frequencies at 2000, 3000, and 4000 hertz in either ear will have another audiometric test performed within 30 days to confirm an STS. If confirmation of an STS is received on the second test, the Department's Training/Safety Officer will perform a STS follow-up interview.

Records of audiometric test results shall be maintained for the duration of employment plus five (5) years.

All employees will participate in annual training regarding the HCP and records of the training shall be maintained by the Department's Training/Safety Officer.

The following table defines specific noise level exposures as measured by the Digital Sound Level Meter (A weighted frequency response curve- 500 to 10,000 Hz range). These measurements are by categories defined in the policy under exposure identification section.

1. Apparatus

Apparatus Designation	Apparatus Name	Measured dbA Level Outside	Measured dbA Level Inside	Hearing Protection Required Outside/Inside*	Minimum Safe Distance**
AP-03-01	Engine - 1	116	93	Yes/Yes	100'
AP-95-01	Ladder - 1	120	87	Yes/Yes	100'
AP-07-03	Engine - 2	110	95	Yes/Yes	100'
AP-96-01	Reserve - 2	116	93	Yes/Yes	100'
AP-00-01	Engine - 3	126	85	Yes/Yes	100'
AP-96-02	Reserve - 3	115	95	Yes/Yes	100'
AP-05-03	Transport - 1	107	80	Yes/No	100'
AP-05-01	Transport - 2	107	80	Yes/No	100'
AP-00-02	Transport - 3	107	80	Yes/No	100'

2. Pump/Aerial Device Operations

AP-03-01	Engine-1	93	N/A	Yes	50'
AP-95-01	Ladder-1	89	N/A	Yes	50'
AP-07-03	Engine-2	95	N/A	Yes	50'
AP-96-01	Reserve-2	95	N/A	Yes	50'
AP-00-01	Engine-3	86	N/A	Yes	50'
AP-96-02	Reserve-3	95	N/A	Yes	50'

3. Tools and Equipment

Type Tool/Equipment	Measured dbA Level	Hearing Protection Required	Minimum Safe Distance
Extrication Equipment	97	Yes	40'
Chain Saws	112	Yes	100'
Portable Generators	110	Yes	75'
24v Sawz All	95	Yes	15'
PPV Ventilation Fans	94	Yes	40'
SCBA Pass Device	95	Yes	10'
Air Compressors	88	Yes	10'
Leaf Blowers	102	Yes	80'
Weed Eater	95	Yes	60'
Lawn Mowers	96	Yes	60'
Diesel Exhaust Fans	83	No	N/A
Dispatch Alert Tone ***			

*Requirement for hearing protection inside cab references emergency response situations. Sound level meter recordings do not require hearing protection inside cabs for non-emergency responses (sirens/horns not in use)

** Minimum Safe Distance = Distance outdoors from designated equipment where dbA measured level is less than 85 and hearing protection is not required. All personnel will wear hearing protection outdoors when apparatus/equipment/tools exceeding 85dbA are in operation unless safety considerations dictate otherwise.

***All dispatch speakers will be equipped with volume rheostats and set at a level between 80-85dbA as measured by department sound level meter.