

# Hearing Conservation Plan

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Environmental Health, Safety, and Risk Management Department

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Nacogdoches, Texas 75962-6113**

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## **I. PURPOSE**

The purpose of the Stephen F. Austin State University (SFA) Hearing Conservation Plan is to prevent any temporary or permanent occupational hearing loss by providing hearing protection and training to all employees working where noise levels exceed an 8-hr time weighted average of 90 dBA (decibels) or sudden bursts exceeding 120 dBA. This plan is based on compliance with OSHA's Hearing Conservation Standard, 29 CFR 1910.95.

## **II. RESPONSIBILITIES**

### **A. Environmental Health, Safety, & Risk Management (EHSRM)**

1. Conduct Noise Surveys - EHSRM or contracted consultant (insurance carrier, other qualified individual) will measure and identify workplace noise levels using a calibrated sound level meter on an as needed basis, or whenever there is a change in equipment, or controls. Monitoring is performed to determine which employees are exposed to excessive noise and fall under the hearing conservation program. Implement engineering or work practice controls and/or PPE requirements to protect employees from occupational hearing loss.
2. Measure noise levels in areas where noise may exceed the OSHA limits and maintain a log of all readings that are performed.
3. Review and update this Hearing Conservation Plan every 3 years or when changes in the workplace or applicable regulations occur.

### **B. Shop Supervisors**

1. SFA Shop Supervisors will notify EHSRM of new equipment purchases or modifications which may affect sound levels. If necessary, on-site visits will be coordinated to monitor noise levels and also assess any potential affects to employee hearing safety.
2. Post warning signs near high noise level areas to notify employees that hearing protection is required when entering an area or operating machinery.
3. Provide all necessary hearing protection and required PPE to employees at the department's expense.

### **C. Employees and Students**

1. Use department issued hearing protection in designated high noise areas or while using high noise equipment.
2. Request new hearing protection when needed.
3. Attend all required hearing conservation safety training.

### **III. PROCEDURES**

The following sections describe the procedures for identifying high noise areas and processes, required employee training, hearing protection and testing, noise limits, and affected employees.

#### **A. Noise Monitoring**

1. Monitoring for noise exposure levels will be conducted by EHSRM with the use of calibrated sound level meters.
2. Monitoring will also be conducted at randomly selected high noise work areas or whenever there is a major change in equipment, process, or controls that affect the noise levels. This includes the addition of new machinery and change in work practices that may affect hearing safety. The responsible supervisor must inform EHSRM when these types of changes are made.

#### **B. Training**

1. Target employees will be required to attend training concerning the required and proper use of hearing protection. The training will be conducted by EHSRM or the shop supervisor within one month of hire and refresher trainings will be provided annually.
2. Training shall consist of the following components:
  - a. how noise affects hearing and hearing loss;
  - b. review of the OSHA hearing protection standard;
  - c. explanation of audiometric testing;
  - d. rules and procedures;
  - e. locations within university property where hearing protection is required;
  - f. how to use and care for hearing protection (PPE).
3. Training records will be maintained by EHSRM. Supervisors conducting the training should forward all training records to EHSRM at [safety@sfasu.edu](mailto:safety@sfasu.edu) or by campus mail Box 6113.

## D. Hearing Protection

1. Each SFA department is responsible for making sure adequate hearing protection is available to employees.
2. All employees working in high noise areas must be provided with appropriate hearing protection devices from the following types listed in the table below. Most hearing protection is available at Central Stores located at the Physical Plant compound.
3. Employees are required to wear the appropriate hearing protection while working or traveling through any high noise exposure area.
4. Damaged or defective hearing protection PPE must be discarded and replaced.
5. Supervisors are required to enforce the hearing conservation plan in their area of responsibility.
6. The OSHA standard requires SFA to provide a variety of hearing protection devices to persons who are required to wear them. The types of protective devices available include:

<b>Type of Hearing Protection</b>	<b>Advantages</b>	<b>Disadvantages</b>
Ear Muffs (ANSI approved)	<p>One size fits most adults.</p> <p>Can easily be seen at a distance.</p> <p>Can be put on, adjusted, etc. while wearing gloves.</p> <p>Can be warming to the ears in cold environments.</p>	<p>Usually have a lower noise reduction rating than earplugs, but still provide effective protection.</p> <p>They are bulky and cannot fit into pockets or stored in tool kits.</p> <p>May interfere with and not sit properly with glasses, hearing aids, etc. because of their size, may not be suitable for the work quarters.</p> <p>Excessive heat and sweat accumulation may make uncomfortable to wear in hot locations.</p> <p>Are more difficult to clean than earplugs.</p>
Ear Plugs (2 types: pre-formed and expandable)	<p>Have highest noise reduction rating and are very effective in protecting your hearing when worn properly.</p> <p>Do not interfere with work in close quarters.</p> <p>Are easily carried and stored when not in use.</p> <p>Compatible with glasses or any other type of headgear without affecting performance.</p> <p>Can be easily cleaned.</p>	<p>Fitting can be complicated. Ear canals vary in diameter and the left and right ear canals are not necessarily similar in size, shape, or position.</p> <p>Can be easily left in other work clothes or fall out of jacket or shirt pocket and become lost.</p> <p>Cannot be seen at a distance, which makes it difficult to evaluate if person is wearing them.</p> <p>Gloves must be removed and hands washed prior to putting in earplugs.</p>

8. It has been determined that hearing protection is required in certain mechanical and equipment rooms where employees will be working for extended periods at or near 8 hours.
9. In addition, hearing protection is required for maintenance staff when using:
  - Lawn equipment
  - Diesel pump operation
  - Grinders

**E. Audiometric/Hearing Testing**

1. EHSRM will schedule audiometric testing for any employee who is occupationally exposed to high noise levels at or above an 8-hr time-weighted average of 85 decibels.
2. Testing will occur within 6 months of an employee’s first exposure at or above the action level to establish a baseline.
3. After obtaining the baseline, an annually audiogram will be conducted for those employees exposed at or above an 8-hr time-weighted average of 85 decibels.
4. EHSRM will inform employees prior to their scheduled testing. Employees must have 14 hours of non-exposure to workplace noise, prior to the actual testing. Protective hearing equipment may be substituted for the necessary waiting period.
5. If an employee’s audiogram suggests that a standard threshold shift has occurred, the employee will be notified in writing within 21 days. He/she will be retested within 30 days via a clinical audiological evaluation or an ontological examination. The new audiogram will be considered as the baseline audiogram for any future testing. The occurrence will be documented and retained by EHSRM.

**F. Noise Limits and Target Employees**

Noise is a common problem in many industry settings, and carries the very serious health hazard of permanent hearing loss. It has been determined that hearing loss occurs if a particular sound is loud enough and long enough; specifically, if the sound intensity exceeds an average of 85 decibels over an eight-hour shift. Here are some decibel readings to give you an example of the level involved:

Noise	Decibel Level
Average Factory	80-90 dB
Lawn Mower	91 dB
Rock concert	105 dB
Jet engine, gunfire, and explosives	Above 140 dB

The following chart illustrates permissible noise exposures that shall not be exceeded without implementing the Hearing Conservation Program.

**PERMISSIBLE NOISE EXPOSURES**

Duration per day, hours	Sound levels dBA slow response.
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1 ½.....	102
1.....	105
½.....	110
¼ or less.....	115

Employees in the following work locations may participate in the hearing conservation program, which may include mandatory audiometric testing. This is not an exhaustive list. Additional campus work locations not included below may also present hearing safety risks thereby requiring hearing protection.

- Shipping and Receiving
- Physical Plant (PPD) Supervisors
- PPD Plumbing Shop
- PPD HVAC Shop
- PPD Carpentry Shop
- PPD Electrician Shop
- PPD Grounds & Transportation
- Residence Life Maintenance Staff
- Student Center Maintenance Staff

For more information or to schedule training, testing, or noise monitoring, contact EHSRM at 468-6034 or [safety@sfasu.edu](mailto:safety@sfasu.edu).