



Hearing Conservation Program

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Section 1 – Introduction

Exposure to excessive levels of noise can result in a permanent loss of hearing acuity, development of tinnitus (ringing of the ears), a possible increase in blood pressure, and stress-related problems. Occupational hearing loss is one of the most common work-related illnesses and is permanent but preventable. Thus, Lewis County has instituted the Hearing Conservation Program to reduce the occurrences of occupational hearing loss.

1.1 Dictionary of Terms

- *Audiogram* a chart, graph or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.
- *A-weighted Decibels (dBA)* an adjustment to sound level measurements that reflects the sensitivity of the human ear.
- *Baseline Audiogram* the audiogram against which future audiograms are compared. The Baseline audiogram is collected when an employee is first assigned to work with noise exposure.
- *C-weighted Decibels (dBC)* an adjustment to sound level measurements that evenly represents frequencies within the range of human hearing. Used for evaluating impact and impulse noise levels.
- *Decibel (dB)* a unit of measurement of sound level. A-weighting, adjusting for the sensitivity of the human ear, is indicated as dBA.
- *Hertz* a unit of measurement for frequency. It measures the pitch or tone of sound
- *Dosimeter* a specialized wearable sound level meter intended specifically to measure the noise exposure of a person integrated over a period of time.
- *Occupational Noise Exposure* the amount of noise that an employee is exposed to during regular operations.
- *Occupational Hearing Loss* a reduction in the ability of an individual to hear either caused or contributed to by exposure in the work environment.
- *Sound Level Meter* a device used to determine the noise level of a particular task, machinery, or area.
- *Standard Threshold Shift* a hearing level change, relative to the baseline audiogram, of an average of 10 dB or more.
- *TWA₈* equivalent eight-hour-timeweighted average sound level.

1.2 Program Overview The establishment of a successful Hearing Conservation Program requires the cooperative efforts of Risk Management and all Lewis County employees, including elected officials and department directors. The intention of the program is to:

- Lower the occurrence of occupational hearing loss.
- Minimize employee noise exposure wherever possible.
- Make sure employees who are exposed to noise are protected.

These goals are accomplished by:

- Identifying and monitoring potentially hazardous noise levels and personnel at risk.
- Implementing noise-reducing engineering and administrative controls whenever feasible.
- Requiring that employees exposed to noise use appropriate hearing protection devices.
- Maintaining appropriate records.
- Coordinating and implementing employee training programs.
- Participating in periodic reviews of the Program to assess its overall effectiveness.

1.3 Applicability This program applies to employees who work in the offices of elected officials, and to employees of departments that report to the Board of County Commissioners (BOCC). This program is designed to meet the requirements outlined in WAC 296-817-099 through WAC 296-817-50025.

1.4 Implementation It is the intent of Lewis County to provide for all employees a work environment that is as free as possible from noise of such amplitude or frequency so as to constitute a health hazard. All employees whose tasks typically expose them to noise levels of 85 dBA TWA₈ or above will be enrolled in the Hearing Conservation Program. These employees will be provided the level of protection, training and, if necessary, such industrial insurance benefits as provided by law. Employees enrolled in the Hearing Conservation Program will also be provided a copy of this Program upon request.

Occupations Included in The Hearing Conservation Program:

- Solid Waste (excluding administrative roles)
- Animal Shelter Division Employees
- Non-Administrative Facilities Employees (including Fairground Maintenance)
- Public Works Road Crew Employees, Engineers and Utility Workers
- Central Shop Employees
- Motor Pool Employees
- Communications Officers (i.e. 911)
- Sheriff's Office Deputies
- Corrections Officers and Designated Staff (excluding administrative roles)
- Building Inspectors

For a complete list of positions included in the Hearing Conservation Program, please see Appendix A – Positions List. The HCP Positions list is a living document and shall be reviewed, and if necessary updated, annually by Risk Management, in collaboration with the affected departments.

Section 2 – Responsibilities

The integrity of the Hearing Conservation Program depends on the cooperative efforts of multiple entities within Lewis County including Elected Officials, Managers, Supervisors, the Risk Management Department and the Employees. Each group has distinct but equally important responsibilities. For more details on the execution of these responsibilities, see Sections 3-7.

2.1 Risk Management is responsible for:

- Evaluating employee concerns regarding noise levels in the workplace.
- Maintaining noise-monitoring equipment.
- Conducting noise exposure monitoring.
- Ensuring appropriate signage is posted in areas where exposure may be above 115 dBA.
- Notifying supervisors in writing of those employees found to be exposed to noise that exceeds the permissible limits.
- Assisting with the design of controls used to reduce employee noise exposure when necessary.
- Maintenance of all records associated with the Hearing Conservation Program.
- Coordination of annual and refresher general training for all employees enrolled in the Hearing Conservation Program.

2.2 Elected Officials are responsible for:

- Adopting this, or a similar program, in order to meet the requirements outlined in WAC 296-817-099 through WAC 296-817-50025.
- Requiring all employees within their individual offices/departments to adhere to this, or a similar program.
- Providing a copy of any published policy regarding this topic to Risk Management.

2.3 Managers and Supervisors are responsible for:

- Informing Risk Management of personnel who are potentially exposed to hazardous levels of noise.
- Ensuring that the noise level of equipment to be acquired is considered in the purchasing process.
- Enrolling employees found to be exposed to noise levels that exceed the permissible limits in the Hearing Conservation Program.
- Enforcing the necessary and required use of hearing protectors and requiring employees to comply with training regiments and audiogram testing as outlined in this policy.
- Ensuring that controls are used on equipment to limit potentially hazardous noise levels, wherever feasible.

2.4 Employees are responsible for:

- Contacting their supervisors and/or Risk Management if noise levels in the workplace are of concern.
- Using hearing protectors where required and complying with signs identifying noisy areas.
- Participating in audiometric testing and education programs as required.

Section 3 - Noise Exposure Monitoring

Noise exposure monitoring is essential to the success of the Hearing Conservation Program. The purpose of noise exposure monitoring is to identify all employees whose exposure equals or exceeds:

- 85 dBA TWA₈ (determined by noise dosimetry, providing an average exposure over an eight-hour time period)
- 115 dBA (determined by slow response sound level meter, identifying short-term noise exposures)
- 140 dBC (determined by fast response sound level meter, identifying almost instantaneous noise exposures)

In addition to revealing the level of noise each individual employee is exposed to during their work shift, the noise exposure monitoring will also help indicate what level of hearing protection (PPE) employees will need on the job, as well as when and where PPE is needed. Results may indicate that employees need to wear PPE only while performing specific tasks, or it may be discovered that PPE is needed throughout the entire shift.

3.1 Noise Monitoring Equipment There are two types of devices that Risk Management will use to monitor noise exposure in the workplace: Sound Level Meters (SLMs) and Noise Dosimeters. Both devices are used to measure noise but serve different purposes.

- Sound Level Meters (SLMs) are used to measure the sound of a particular task, machinery, or area. The measurements taken by an SLM assist Risk Management with understanding the short-term and instantaneous noise an employee is exposed to.
- Noise Dosimeters are used to find out the direct noise exposure of an employee over time. The measurements provide an average noise exposure reading for a given time period. The device is wearable and will be attached to the employee's shoulder, near the ear, for the duration of their shift.

Noise monitoring equipment shall meet the current American National Standards Institute (ANSI) standards, as outlined in WAC 296-817-30005.

3.2 Conducting Noise Exposure Monitoring A Risk Management representative will conduct personal noise exposure monitoring using a dosimeter, as outlined in WAC 296-817-20005, in areas that:

- It is reasonable to assume that any employee's exposure may equal or exceed 85 dBA TWA₈.
- An employee expressed concern over noise exposure.
- A change in production, process, equipment or controls has occurred and may reasonably be expected to result in additional employees being exposed to noise or higher levels of noise than previously recorded.

Dosimeter measurements are necessary when employees experience long periods of noise exposure, such as on construction sites or road crews. Representative dosimeter monitoring may be used where several employees perform the same tasks in substantially similar conditions. SLM measurements are necessary when employees are exposed to periodic noise exposure, such as when they use a specific tool or machine or walk into a specific area.

3.3 Employee Notification Risk Management representatives will use the forms found in the appendix of this policy to document and record the results of their noise exposure monitoring. Employees must be provided the results of the monitoring upon request. Employees exposed to occupational noise, and their representatives, must be provided the opportunity to observe any measurements that are being conducted.

Each employee exposed at or above an 8-hour time-weighted average (TWA) of 85 dBA must be notified of the results of the noise monitoring within five working days of when results are received.

3.4 Posted Warning Signs Warning signs must be posted at the entrance to or at the periphery of all well-defined work areas in which persons may be exposed to 115 dBA or more. Warning signs must clearly indicate that the area is a high noise area and that hearing protectors (PPE) are required.

3.5 Controls Actions that eliminate noise exposure at the source, or controls, must be applied whenever noise exposure equals or exceeds 90 dBA TWA⁸. Hearing protection is not considered a control of noise hazard. Hearing protection has separate requirements from controls. The requirements for hearing protection are outlined in *Section 5 Hearing Protection Devices (PPE)*.

Some examples of feasible controls include:

- Replacing noisy equipment with quieter equipment
- Using silencers or mufflers
- Installing enclosures
- Damping noisy equipment and parts
- Rotating employees to limit exposure
- Limiting use of noisy equipment
- Rescheduling work assignments

Once noise exposures are brought below 90 dBA TWA⁸ using methods listed above (or by using any other feasible controls), no further reduction is required. However, if further noise reduction is feasible, it is always best practice to reduce noise exposure as much as possible.

3.6 Noise Exposure Monitoring Recordkeeping Records documenting noise exposure must be kept for a minimum of two years, or for as long as Lewis County intends to rely upon the results to determine employee exposure. It is the responsibility of Risk Management to maintain all Hearing Conservation Program records. The necessary forms for conducting and recording dosimeter and SLM monitoring can be found on the employee intranet site, under the Risk page.

Section 4 – Audiometric Testing

Employees enrolled in the Hearing Conservation Program will need to participate in audiometric testing (audiograms). The audiograms will be provided at no cost to the employee. Audiograms will be provided by a healthcare servicer whose equipment meets the standards outlined in WAC 296-817-40034.

4.1 Baseline Testing Employees assigned to work in areas that have noise exposure that equals or exceeds 85 dBA TWA8 will be required to do a baseline audiogram. The baseline audiogram will occur on their start date, as part of their new hire orientation. Once the audiogram is completed, records of the baseline test shall be provided to Risk Management which will maintain the record for the duration of employment or the duration of time the employee is exposed to occupational noise as part of their general duties.

4.2 Annual Testing Annual audiometric testing is required for all employees who continue to be exposed to noise that equals or exceeds 85 dBA TWA8. Testing can be conducted at any time during a work shift. The annual audiogram must be compared to the baseline audiogram by a qualified physician or the technician conducting the test to determine if a standard threshold shift has occurred. Employees must be informed of their test results. Once the audiogram is completed, records of the annual test shall be provided to Risk Management which will maintain the record for the duration of employment or the duration of time the employee is exposed to occupational noise as part of their general duties.

4.3 Standard Threshold Shifts A Standard Threshold Shift, or STS, is defined as a change in hearing threshold, relative to the baseline audiogram for that employee, of an average of 10 decibels (dB) in one or both ears. If a threshold shift is observed by the qualified physician or the technician conducting the test:

- A retest may be obtained within 30 days. The retest may be used in place of the annual audiogram if results differ. If Lewis County determined a retest is necessary, the employees must limit their noise exposure for at least 14 hours prior to the retest.
- The employee must be notified in writing, within 21 days from the time of determination. Notification may be provided by the employee's direct supervisor, a department administrator with permission to access medical records or a Risk Management employee.
- Lewis County is required to pay for any clinical audiological or otological examination required by the reviewer if:
 - Additional review is necessary in order to evaluate the cause of the hearing loss or
 - There is indication of a medical condition of the ear caused or aggravated by the wearing of hearing protectors.
- The employee's supervisor must make arrangements for the reviewer to communicate to the employee any suspected medical conditions that are found unrelated to the workplace. This information is confidential and must be handled appropriately.

- If the employee displaying an STS already wears hearing protection, they must be retrained in its use and fitted with more efficient hearing protection if necessary. If the employee does not wear hearing protection, they must be provided hearing protection, trained in its use, and required to wear it.
- The health care professionals supervising audiograms may assist in determining whether the results indicate possible occupational hearing loss and may make recommendations for changes in PPE.

4.4 Audiometric Testing Recordkeeping Audiometric testing results for each employee assessed must be kept for the length of the employment or so long as the employee is exposed to occupational noise as part of their general duties. It is the responsibility of Risk Management to maintain all Hearing Conservation Program records. Audiogram records should include:

- Name of employee and job title
- Date of the audiogram
- Examiner's name
- Date of the last acoustic or exhaustive calibration of the audiometer
- Employee's most recent Sound Level Survey
- Background sound pressure levels in audiometric test rooms

Section 5 – Hearing Protection Devices (PPE)

Employees must use hearing protection (PPE) when their noise exposure equals or exceeds:

- 85 dBA TWA₈
- 115 dBA
- 140 dBC

It is the responsibility of the supervisor and the employee to ensure PPE is being worn. The selection of PPE must include at least two distinct types, including but not limited to earplugs, ear caps and earmuffs. PPE shall be provided at no cost to the employee and must be sufficient enough to cover:

- Different levels of hearing protection needed in order to reduce employee exposure to a level below 85 dBA TWA₈.
- Different sizes needed by employees.
- Different working conditions.
- Employee requests regarding physical comfort, medical needs, environmental conditions and communication requirements.

5.1 Supervising PPE Usage It is the responsibility of the direct supervisor to ensure that hearing protection:

- Is being used correctly
- Fits properly
- Is replaced as necessary
- Reduces employee's equivalent eight-hour noise exposure to 85 dBA or less

5.2 Determining PPE Noise Reduction Supervisors shall use the following guidelines to determine the noise reduction provided by PPE, as outlined in WAC 296-817-20015:

- *Single hearing protection:* Employee is using a single hearing protection device e.g. earplugs with no additional PPE. Supervisors shall consider this protection to be 7 dB less than the manufacturer assigned noise reduction rating (NRR). For example, Employee A is wearing earplugs with an NRR rating of 20 dB at their job site with 95 dBA TWA₈ exposure. Using the standards set out in WAC 296-817-20015, the supervisor should only reduce the noise exposure by 13 (*20 minus 7*). By wearing earplugs, Employee A's noise exposure has been reduced to 82 dBA TWA₈.
- *Dual hearing protection:* Employee is using two pieces of hearing protection in tandem, e.g. earplugs and earmuffs worn simultaneously. Supervisors shall consider this protection to be 2 dB less than the higher NRR of the two protectors. For example, Employee A is wearing earplugs with an NRR rating of 20 dB and earmuffs with an NRR of 12 dB at their job site with 100 dBA TWA₈ exposure. Using the standards set out in WAC 296-817-20015 the supervisor should only reduce the noise exposure by 18 (*20 minus 2*). By wearing earplugs and earmuffs, Employee A's noise exposure has been reduced to 82 dBA.

Section 6 – Training

All employees enrolled in the Hearing Conservation Program shall receive training upon hiring and at least annually after initial training. Training responsibilities shall be delineated between Risk Management and each individual department/office. This is an attempt to ensure training includes both a general and workplace-specific approach.

6.1 General Training The general training for all employees enrolled in the Hearing Conservation Program shall be provided by Risk Management. This training shall include:

- The effects of noise on hearing (including occupational and nonoccupational exposures).
- A review of the various noise controls used by Lewis County.
- The purpose of hearing protectors and an overview of various types (including the longevity of the hearing protectors).
- Instructions about selecting the appropriate hearing protectors, assuring their fit, and an overview of use and care.
- An overview of the Hearing Conservation Program.
- A review of employees' right to access records kept by the employer.

6.2 Workplace-Specific Training Supervisors are responsible for ensuring that any additional workplace-specific training needed for a role is conducted upon hiring as well as at least annually afterward. Supervisors are also required to provide documentation of additional training to Risk Management.

6.3 Training Recordkeeping Logs of initial and refresher training must be maintained by Risk Management for the duration of employment, or until the employee is moved to a role where they are no longer exposed to occupational noise. Records regarding any workplace-specific training shall be collected by the employee's supervisor and maintained by Risk Management.

Appendix A- Positions List

Location	Job Title	Position Control #
Animal Shelter	Animal Shelter Assistant	1306001
Animal Shelter	Animal Shelter Manager	1307001
Animal Shelter	Animal Shelter Tech	1308001
Animal Shelter	Animal Shelter Tech – Hourly	1309001
Animal Shelter	Animal Shelter Workers	1311001
Communications	911 Director	1645001
Communications	E911 Manager	1358001
Communications	E911 Telecom Op. – Extra Help	1642001
Communications	PS Telecom Operator	1336001
Communications	PS Telecom Operator – Hourly	1732001
Communications	PS Telecom Supervisor	1352001
Communications	Radio Services Supervisor	1606001
Community Development	Building Inspector – Extra Help	1504001
Community Development	Building Inspector I	151401
Community Development	Building Inspector II	1515001
Community Development	Building Inspector III	1517001
Community Development	Building Inspector IV	1503001
Community Development	Building Officer/Fire Marshal	1502001
Equipment Rental & Revolving	Central Shop Supervisor	1575001
Equipment Rental & Revolving	Fleet Manager	1577001
Equipment Rental & Revolving	Fleet Operations Coordinator	1569001
Equipment Rental & Revolving	Jr. Mechanic II Auto	1579001
Equipment Rental & Revolving	Jr. Mechanic II – Frozen	1570001
Equipment Rental & Revolving	Mech. Journey Heavy Equipment	1571001
Equipment Rental & Revolving	Motorpool Mechanic Lead	1581001
Equipment Rental & Revolving	Parts Specialist	1574001
Facilities	Office Manager	1137007
Facilities	Caretaker	1329001
Facilities	Custodial Lead	1589001
Facilities	Maintenance Tech Lead	1597001
Facilities	Custodian	1587001
Facilities	Custodian Senior	1588001
Facilities	Director of Facilities	1585001
Facilities	Electrician	1596001
Facilities	Facilities – Extra Help	1576001
Facilities	Maintenance Operations Manager	1604001
Facilities	Extra Help - Facilities	1580001
Facilities	Facilities Administrator	1637001
Facilities	Maintenance Supervisor	1639001
Facilities	Facilities Manager	1583001
Facilities	Maintenance Tech	1593001
Facilities	Maintenance Tech Senior	1549001

Appendix A – Position List Continued

Location	Job Title	Position Control #
Facilities	Operations Manager	1745001
Jail	Corrections – Extra Help	1221001
Jail	Corrections Deputy	1222001
Jail	Corrections Sergeant	1261001
Jail	Jail Captain	1210001
Jail	Lieutenant	1213001
Juvenile	Juvenile Probation Officer II	1284001
Juvenile	Juvenile Detention Manager	1290001
Juvenile	Juvenile Detention Officer	1291001
Juvenile	Juvenile Detention Officer II	1292001
Juvenile	Probation Officer - Hourly	1299001
Juvenile	Detention Officer – Hourly	1300001
Juvenile	Juvenile – Extra Help	1301001
Juvenile	Detention Supervisor	1302001
Juvenile	Community Services Officer	1277001
Juvenile	Probation Manager	1281001
Parks & Recreation	Fair & Events Coordinator	1344001
Parks & Recreation	Grounds Tech I	1346001
Parks & Recreation	Grounds Tech II	1347001
Radio Services	Radio Services Manager	1607001
Radio Services	Radio Services Administrator	1610001
Radio Services	Radio Services Tech II	1609001
Risk Management	Safety Officer	1135001
Roads	Area Shop Assistant	1369001
Roads	Associate Engineer EIT	1395001
Roads	Assistant County Engineer	1368001
Roads	Engineer Non-PE	1390001
Roads	Engineerin – Extra Help	1451001
Roads	Engineering Tech I	1372001
Roads	Engineering Tech I – Hourly	1371001
Roads	Engineering Tech II	1373001
Roads	Engineering Tech III	1376001
Roads	Engineering Tech IV	1387001
Roads	Engineering Tech II – Bridges	1370001
Roads	Engineering Tech V	1388001
Roads	Enviromental Planner	1396001
Roads	Enviromental Tech II	1377001
Roads	Enviromental Tech II – Series	1378001
Roads	Roads – Extra Help	1452001
Roads	Right of Way Specialist I – Hourly	1380001
Roads	Right of Way Specialist II	1382001
Roads	Maintenance Assistant Supervisor	1454001

Appendix A – Positions List Continued

Location	Job Title	Position Control #
Roads	Maintenance Lead Supervisor	1455001
Roads	Maintenance Manager	1457001
Roads	Area I Maintenance Supervisor	1456001
Roads	Road Maintenance Tech I	1398001
Roads	Road Maintenance Tech II	1403001
Roads	Road Maintenance Tech III	1406001
Roads	County Engineer	1474001
Roads	Public Works Director	1478001
Roads	Area I Road Maintenance Tech IV	1431001
Roads	Special Operations – RMT II	1407001
Roads	Utility Supervisor	1461001
Roads	Senior Engineer – Non-PE	1714001
Roads	Senior Engineer (PE) – Survey	1458001
Roads	Senior Engineer Design Env.	1397001
Roads	Survey Tech IV	1386001
Roads	Survey Tech I	1367001
Roads	Traffic Control Specialist I	1463001
Roads	Traffic Control Specialist II	1467001
Roads	Traffic Control Specialist III	1468001
Roads	Traffic Control Supervisor	1470001
Roads	Traffic Control Ops Specialist III	1469001
Sheriff	Captain	1139001
Sheriff	Chief Civil Deputy	1140001
Sheriff	Deputy	1174001
Sheriff	Detective	1161001
Sheriff	Detective Sergeant	1165001
Sheriff	Field Operations Chief	1141001
Sheriff	Property & Evidence Manager	1201001
Sheriff	Sergeant	1203001
Sheriff	Sheriff	1142001
Sheriff	Sheriff – Extra Help	1167001
Sheriff	Undersheriff	1144001
Solid Waste	Solid Waste – Extra Help	1556001
Solid Waste	Hazardous Waste Program Coord.	1558001
Solid Waste	Litter Control Tech	1559001
Solid Waste	Extra Help – Facilities	1582001
Solid Waste	Solid Waste Manager	1545001
Solid Waste	Operations Specialist I	1552001
Solid Waste	Operations Specialist Senior	1553001
Solid Waste	Solid Waste Specialist	1560001
Solid Waste	Sustainability Program Co.	1572001
Solid Waste	SW Tech Senior	1562001

Appendix A – Positions List Continued

Location	Job Title	Position Control #
Solid Waste	SWOS I CTS	1561001
Solid Waste	Transfer Station Supervisor	1557001
South County Airport	Airport Systems Manager	1564001
Southwest Washington Fair	Building & Grounds Supervisor	1339001
Southwest Washington Fair	Fair & Events Manager	1332001
Vader Water Utility	Utility Operator III	1566001
Vader Water Utility	Utility Operator II	1567001
Vader Water Utility	Water Systems Operator	1568001