I. PURPOSE:

The primary goal of the Villanova University Hearing Conservation Program is to comply with the requirements of the Occupational Safety and Health Administration (OSHA) hearing conservation requirements, as promulgated at 1010.95 in order to reduce, and eventually eliminate hearing loss due to workplace noise exposures.

II. POLICY:

It is the policy of Villanova University in coordination with the Department of Environmental Health and Safety to provide employees with a safe and healthful working environment. This is accomplished by utilizing facilities and equipment that have all feasible safeguards incorporated into their design. When effective engineering controls are not feasible, or while they are being initiated, administrative controls will be used when and where possible. Finally personal protective equipment will be used.

III. PROCEDURE:

The Hearing Conservation Plan (HCP) includes the following elements:

1. Work environments will be surveyed to identify potentially hazardous noise levels and personnel at risk.

2. Environments that contain equipment that produces potentially hazardous noise should, wherever it is technologically and economically feasible, be modified to reduce the noise level to acceptable levels.

3. Where engineering controls are not feasible, administrative controls and/or the use of hearing protective devices will be employed. Annual hearing testing will be conducted for employees regularly exposed to hazardous noise levels to monitor the effectiveness of the hearing conservation program. Early detection of temporary threshold shifts will allow further protective action to be taken before permanent hearing loss occurs.
4. Education is vital to the overall success of a hearing conservation program. Annual training is required for the employees subject to the program and their supervisors.

5. When the sound levels listed below are exceeded, reasonable administrative or engineering controls will be instituted. If the controls fail to reduce the noise exposure to within those listed below, hearing protection will be provided and used to reduce the sound levels to an acceptable level. In addition, OSHA requirements dictate that whenever employee noise exposures equal or exceed an 8-hour time-weighted average (TWA) of 85 dBA, slow response, a continuing effective hearing conservation program shall be instituted.

IV. RESPONSIBILITIES:

Environmental Health & Safety Department (EHS) is responsible for developing, implementing, and administering the Villanova University Hearing Conservation Program.

Additional responsibilities include:

Identification of work areas and equipment within Villanova University facilities where noise levels equal or exceed 85 dBA. This included conducting noise surveys/dosimetry to determine which areas require warning signage.

Identification, through personnel monitoring, of Villanova University employees whose noise exposure level equals or exceeds an 8-hour TWA of 85 dBA or shorter time exposure as listed in the table in Appendix B from OSHA CFR 1910.95 AppII:A.

Notifying employees and their supervisors of employee exposure measurements.
Training employees in the need for, proper use and care of hearing protection devices.

Conducting baseline (for employees new to the HCP) and annual (for all enrolled employees) audiograms and notifying employees’ supervisors. Villanova’s Occupational Medical Providers provide the employee audiogram in accordance with OSHA's noise requirements 29 CFR 1910.95.

Supervisors are responsible to:

Ensure that all of their employees exposed to noise levels equal to or greater than 85 dBA have access to appropriate hearing protective devices in the work area

Enroll those employee(s) in the hearing conservation program (HCP) if identified as having an 8-hour TWA equal to or exceeding 85 dBA.

Maintain a supply of appropriate hearing protective devices (at no cost to employee) and enforce their use, using established disciplinary procedures.

Enforce use of engineering and administrative controls in designated noise hazardous areas, when they are available.

Coordinate and schedule HCP training (with EHS) for all Villanova University personnel enrolled in the HCP.

Ensure that the following are maintained:

- Signs posted at the entrance to any work area where noise levels equal or exceed 85 dBA;
- Hearing Protection Devices (HPD) are used and maintained as originally intended and in accordance with instructions provided.
Employees are responsible to wear and maintain hearing protective devices as instructed. Employees enrolled in the University's Hearing Conservation Program must also participate in annual training programs and the medical surveillance program, which includes baseline and annual audiometric testing.

V. NOISE CONTROL METHODS

Engineering and Administrative Controls

The primary means of reducing or eliminating personnel exposure to hazardous noise is through the application of engineering controls. Engineering controls are defined as any modification or replacement of equipment, or related physical change at the noise source or along the transmission path that reduces the noise level at the employee's ear. Engineering controls such as mufflers on heavy equipment exhausts or on air release valves are required where possible.

Administrative Controls are defined as changes in the work schedule or operations which reduce noise exposure. If engineering solutions cannot reduce the noise, administrative controls such as increasing the distance between the noise source and the worker or rotation of jobs between workers in the high noise area should be used if possible.

The use of engineering and administrative controls should reduce noise exposure to the point where the hazard to hearing is eliminated or at least more manageable.

Personal Protective Equipment

Hearing protective devices (ear plugs, mufffs, etc.) shall be a permanent solution only when engineering or administrative controls are considered to be infeasible or cost prohibitive. Hearing protective devices are defined as any device that can be worn to reduce the level of sound entering the ear. Hearing protective devices shall be worn by all personnel when they must enter or work in an area where the operations generate noise levels of:
Greater than 85 dBA sound levels and/or; 120 dB peak sound pressure level or greater or greater than the table in Appendix B.

Selection of Hearing Protective Devices

Employees will be given the opportunity to select hearing protective devices from a variety of suitable ones provided by EHS. In all cases the chosen hearing protectors shall have a Noise Reduction Ratio (NRR) high enough to reduce the noise at the ear drum to 80 dBA or lower.

Issuance of Hearing Protective Devices

The issuance of hearing protective devices is handled through the Supervisor. Instruction on the proper use and care of earplugs and earmuffs will be included in annual training for those enrolled in the HCP.

Personnel requiring earmuffs in addition to earplugs will be informed of this requirement and educated on the importance of using proper hearing protection. The Supervisor will dispense ear muffs when necessary and will maintain a supply of disposable earplugs.

VII. MEDICAL SURVEILLANCE

Notification

Upon identification of employees whose 8-hour TWA equals or exceeds 85 dBA, EHS will inform the employee(s), and the employees' Supervisor, in writing, of the need to enroll certain employee(s) in the Hearing Conservation Program. It is the responsibility of the supervisor to enroll his/her employee in the Hearing Conservation Program.

In work locations where, either through administrative or engineering controls, noise levels are found to have fallen such that the employee's 8-hour TWA is below 80 dBA, EHS shall notify the employee, and the employee's Supervisor,
that the employee working in that area is no longer required to be enrolled in the Hearing Conservation Program.

The final decision as to an employee's enrollment status will be left with the Department of Environmental Health and Safety.

The results of area and personal monitoring shall be recorded in EHS and personal files upon completion of the noise surveys.

Any personnel experiencing difficulty in wearing assigned hearing protection (i.e., irritation of the canals, pain) will be advised to immediately report this to their supervisor and make arrangements to go to Work Net for an evaluation as soon as possible.

Audiometric Testing

The EHS Department has the responsibility for administering the Audiometric Testing Program portion of the Villanova University Hearing Conservation Program. The objective of the audiometric testing program is to identify workers who are beginning to lose their hearing and to intervene before the hearing loss becomes worse. Audiometric testing will be provided to all employees whenever employee noise exposures equal or exceed an 8-hr. time-weighted average (TWA) of 85 dBA. Annual testing will be performed for all personnel enrolled in the Hearing Conservation Medical Surveillance Program.

VIII. TRAINING

The training and education program will provide information about the adverse effects of noise and how to prevent noise-induced hearing loss. At a minimum, all training will cover the following topics:

- Noise induced hearing loss;
- Recognizing hazardous noise;
- Symptoms of overexposure to noise;
- Hearing protection devices (HPD's)- advantages & limitations;
- Selection, fitting, use and maintenance of HPD's;
• Explanation of noise measurement procedures;
• Hearing conservation program requirements.
• Identification of noise control measures (including engineering and administrative controls) and recommendations;

Employees will be provided with copies of the OSHA noise standard (29 CFR 1910.95) and other materials describing the Villanova University Hearing Conservation Program.

University employees shall be encouraged to use hearing protective devices when they are exposed to hazardous noise during activities at home; e.g., from lawn mowers, chain saws, etc.

The Department of Environmental Health and Safety will provide annual refresher training. Supervisors must contact EHS to schedule training for new personnel assigned to work in noisy environments and for retraining of current personnel.

IX. RECORDKEEPING

Hearing Conservation Program records will include the following:

• Record
• Location
• Medical Evaluation and Audiograms
• Training Records
• Hazard Evaluations

All non-medical records (ex., work area and equipment surveys) will be maintained for a period of five years. Results of hearing tests and medical evaluations performed for hearing conservation purposes as well as noise exposure documentation shall be recorded and shall be a permanent part of an employee's health record.
All personnel who routinely work in designated hazardous noise areas shall be identified and a current roster of such personnel shall be maintained by EHS and updated periodically.

**Appendix A:**

OSHA CFR: 1910.95

**Appendix B:**

OSHA CFR: 1910.95 Appendix II:A


### PERMISSIBLE NOISE EXPOSURES

<table>
<thead>
<tr>
<th>Duration per day, hours</th>
<th>Sound level dBA slow response</th>
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<td>102</td>
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<tr>
<td>1/4 or less</td>
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