THE OHIO STATE UNIVERSITY

Safety Management Guidebook

Ohio Bureau of Workers' Compensation Public Employment Risk Reduction Program (PERRP)

Occupational Safety and Health Administration (OSHA)

OSU Office of Environmental Health and Safety (EHS)
Division of Occupational Safety and Industrial Hygiene

Safety Management Guidebook

This manual was developed by The Ohio State University (OSU) Office of Environmental Health and Safety (EHS) to provide administrative units with assistance complying with the State of Ohio Bureau of Workers' Compensation Public Employment Risk Reduction Program (PERRP). PERRP, as part of Ohio House Bill 308, adopted all Federal Occupational Safety and Health Administration (OSHA) standards found in the Code of Federal Regulations (CFR) Title 29 Parts 1910, 1926 and 1928. All adopted Ohio Employment Risk Reduction Standards are found in Chapter 4167 of the Ohio Revised Code and the Ohio Administrative Code.

The role and mission of PERRP is to ensure public employees in Ohio have safe and healthy working conditions. Public employers must furnish to each public employee a workplace free from recognized hazards that are causing or are likely to cause death or serious physical harm. This fundamental requirement is the foundation of the Public Employment Risk Reduction Act (the Act) which is also referred to as House Bill (HB) 308.

EHS will work with departmental safety representatives (OSHA Coordinators), committees, employees and students throughout the university to address safety issues and to facilitate compliance with all PERRP/OSHA standards. The responsibility to comply with PERRP/OSHA regulations is the responsibility of the working unit.

This guidebook should be used by all units, including regional campuses.

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Safety Management Guidebook

PROMULGATION STATEMENT

Council of Deans, Vice Presidents and Departmental Leadership:

The Ohio State University, in accordance with its obligations under the State of Ohio Public Employment Risk Reduction Program (PERRP), is committed to providing a safe and healthy work environment for its faculty and staff, which in turn fosters a safe learning environment for students. To support this commitment, all members of the university community need to participate in an ongoing safety management program. The Safety Management Guidebook addresses this commitment and compliance with PERRP regulations at the department level. This guidebook touches on a broad spectrum of safety and health related issues and affects all aspects of university operations.

Your assistance is essential in managing this campus-wide commitment to safety. By encouraging a climate of safety compliance within your college and/or department and by supporting a commitment to safety compliance, you will assist the university in reaching its goal of campus-wide safety.

To this end, I direct you to develop a safety plan by completing the steps outlined in this guidebook, and to periodically review your area's progress with that plan. I also urge you to continue to provide an OSHA coordinator (safety representative) to further assist with these tasks.

The Office of Environmental Health and Safety (EHS) is available to assist you in this endeavor. EHS has spent considerable time evaluating safety management practices, coordinating health and safety policies and procedures and developing implementation strategies, including this Safety Management Guidebook.

This guidebook contains information that will help you and your staff to assess your safety management and compliance needs and implement appropriate programs.

Each of us has a responsibility for workplace safety, and I, too, support these programs which enable us to reach our goals.

DRAFT – not yet signed _____ _____

Dr. Michael Drake
PRESIDENT, The Ohio State University

Date

DRAFT – not yet signed _____ _____

Dr. Joseph E. Steinmetz
Executive Vice President and Provost, The Ohio State University

Date

SAFETY MANAGEMENT GUIDEBOOK

Purpose:

The Safety Management Guidebook (SMG) is presented in a format so administrative units can quickly determine:

- Which standards apply to them
- Employee responsibilities
- Responsibilities of the administrative unit
- Resources available to help with compliance

Introduction:

Administrative units at OSU are responsible for identifying and assigning safety compliance responsibilities to an OSHA Coordinator (safety representative) within their unit. Additionally, administrative units with several or large safety concerns are encouraged to establish safety committees.

Step 1: Appoint an OSHA Coordinator (safety representative)

In order to effectively organize and coordinate safety related activities, each administrative unit at OSU must select an individual to serve as their OSHA Coordinator. This person will act as a liaison between the unit and EHS and coordinate departmental safety compliance.

Step 2: Review this Manual

This SMG has been developed to guide the administrative unit (OSHA Coordinator) through the step by step process of understanding and implementing standards required by applicable laws and regulations. It sets forth university policies, procedures and practices and identifies available resources to help with implementation.

Step 3: Complete the OSHA Standard Questionnaire

The OSHA Standard Questionnaire is provided to serve as a guide for determining which standards apply to the administrative unit. Each of the questions is based on one standard. A YES answer to a question indicates the standard applies to the unit. Each section of standards contains information pertaining to the standard, written programs as well as a “self-help checklist” and the OSHA fact sheet, if available.

Step 4: Implement Applicable Sections of Standards

This guidebook contains Sections of Standards that will provide the necessary information and contacts to help the OSHA Coordinator ensure the administrative unit is in compliance with applicable safety standards and regulations. Refer to the Sections of Standards to implement necessary programs.

Step 5: Ensure Departmental Commitment to Safety Compliance

Safety compliance is the responsibility of every employee. Supervisors are responsible to ensure employees have all the tools and knowledge to safely do their jobs and comply with regulations. The OSHA Coordinator assists supervisors in identifying the safety programs necessary to comply and acts as a liaison between employees/ supervisors and EHS. Additionally, the OSHA Coordinator is responsible for ensuring the appropriate departmental safety/compliance programs, ensuring training is provided, maintaining appropriate records, communicating hazards and helping ensure a safe working environment by communicating hazards and implementing engineering and administrative controls and good work practices.

TABLE OF CONTENTS

GETTING STARTED

STANDARDS/POLICIES

GETTING STARTED

OSHA Coordinator

The OSHA Coordinator has important responsibilities within the administrative unit; these responsibilities are not meant to overburden the individual selected to perform them. It should be noted that the OSHA Coordinator may delegate all, some or none of these responsibilities to other individuals within the administrative unit. However, the OSHA Coordinator is responsible and accountable for ensuring duties are completed.

The OSHA Coordinator should have good communication skills; be experienced and dependable; have knowledge of university policies and the operations of the administrative unit; be respected; be a cooperative individual and a team player; and be committed to the health and a safety of the personnel in the administrative unit. The OSHA Coordinator position is important to ensure a safe working environment; compliance with applicable laws and regulations; save money on workers' compensation; facilitate corrective actions and create a competitive advantage for recruiting faculty, staff, students and research grants.

Responsibilities

- Acts as a liaison between the administrative unit and EHS
- Assists in accident investigation and reporting activities
- Assists in the completion of Building Emergency Action Plans (BEAPs)
- Coordinates Safety Management Guidebook activities within the administrative unit
- Facilitates the correction of safety issues within their administrative unit
- Coordinates OSHA required training activities and complies with standards
- Ensures the PERRP 300 Log responsibilities area assigned for tracking and reporting work related injury and/or illness
- Maintains required written safety and health programs
- Ensures departmental supervisors are providing and/or arranging the appropriate training for departmental personnel
- Maintains records (including training)
- Ensures hazards are communicated to personnel

OSHA Standards Questionnaire

Use this questionnaire to quickly determine which standards apply to the administrative unit. The questions are set up in a decision tree format. Yes answers require compliance with the standard; "go to" the section/standard for information on compliance. Standards 1-3 are required for all administrative units. The administrative unit is responsible for compliance with all standards which apply to their activities.

1. **ALL** administrative units are required to keep track of employee accidents and post an annual PERRP300A form in their department for public viewing. If the administrative unit has employees, this standard applies (even if no employees were injured during a given year).
   Go to Standard 1

2. **ALL** administrative units must ensure the buildings they occupy have a completed Building Emergency Action Plan (BEAP).
   Go to Standard 2

3. **ALL** administrative units must develop and maintain a Hazard Communication Program even in a non-laboratory setting.
   Go to Standard 3

4. Does the administrative unit contain laboratories that use hazardous chemicals?
   ☐No ☐Yes Go to Standard 4

5. Are employees subject to exposure to human blood or other potentially infectious materials?
   ☐No ☐Yes Go to Standard 5

6. Are hazards present or likely to be present which necessitate the use of personal protective equipment (i.e., gloves, safety glasses/goggles, steel toe shoes/rubber boots, hard hats, etc.)?
   ☐No ☐Yes Go to Standard 6

7. Do employees use respiratory protection?
   ☐No ☐Yes Go to Standard 7

8. Are employees exposed to elevated working surfaces (includes walking/working surfaces, aerial lifts, ladders, scaffolding, etc.).
   ☐No ☐Yes Go to Standard 8

9. Are employees required to work on rooftops or other areas where falls could occur and would require fall protection?
   ☐No ☐Yes Go to Standard 9

10. Are employees required to enter confined spaces?
    ☐No ☐Yes Go to Standard 10

11. Do employees service or maintain equipment or machinery that possesses energy which could injure employees during these activities (requires Lockout/Tagout)?
    ☐No ☐Yes Go to Standard 11

12. Are employees exposed to sustained loud noises?
    ☐No ☐Yes Go to Standard 12

13. Do employees conduct Hot Work (welding/cutting/brazing) operations?
    ☐No ☐Yes Go to Standard 13

14. Do employees work in Shops (maintenance, woodworking, machine)?
☐No ☐Yes Go to Standard 14

15. Are contractors used or managed by the administrative unit?
☐No ☐Yes Go to Standard 15

16. Do employees operate Powered Industrial Trucks (Forklifts)?
☐No ☐Yes Go to Standard 16

17. Does the administrative unit use or conduct research on Nanoparticles?
☐No ☐Yes Go to Standard 17

18. Are Lasers used?
☐No ☐Yes Go to Standard 18

19. Does the administrative unit have areas that require safety or accident prevention signage?
☐No ☐Yes Go to Standard 19

20. Does the administrative unit have employees who are required to attend safety training?
☐No ☐Yes Go to Standard 20

21. Does the administrative unit engage in scientific diving?
☐No ☐Yes Go to Standard 21

22. Does the administrative unit have minors working in environments that pose chemical, physical, biological or radiological hazards?
☐No ☐Yes Go to Standard 22

23. Does the administrative unit have employees working alone?
☐No ☐Yes Go to Standard 23

24. Does the administrative unit have employees who are need employment medical surveillance due to exposures or regulatory requirements?
☐No ☐Yes Go to Standard 24

25. Does the administrative unit have employees who have exposures to animals?
☐No ☐Yes Go to Standard 25

26. Does the administrative unit supply employees with basic First Aid Kits?
☐No ☐Yes Go to Standard 26

27. Does the administrative own any Automatic External Defibrillators (AEDs)?
☐No ☐Yes Go to Standard 27

28. Does the administrative unit engage in activities that expose employees to Legionella (i.e., cooling tower maintenance, etc.)?
☐No ☐Yes Go to Standard 28

Responsibilities for Safety:

Departmental/Supervisors:

All supervisors, department chairs, heads of offices, directors of programs, laboratory directors, principal investigators, managers, foremen, etc. are responsible for the health and safety of employees engaged in activities under their direction or supervision; and compliance with all regulatory requirements affecting their operations. They are in key positions to carry out and ensure employees comply with all relevant regulations and accepted standards and work activities are performed in a safe and considerate manner. Providing a safe working environment with all the necessary written programs, training and personal protective equipment is the responsibility of the supervisor.

Employees:

Every OSU employee is responsible for complying with the applicable provisions of health and safety standards and regulations promulgated by regulatory agencies. They must also adhere to and comply with all regulatory, university and departmental safety policies and procedures. Employees must:

- Attend appropriate training courses to become thoroughly informed of all safety policies, rules and procedures and how they apply to their responsibilities and authority.
- Create a safety culture by informing co-workers and students that safety and health are top priorities.
- Always use the proper safety equipment, devices and personal protective equipment and apparel.
- Assist with instruction in the proper operation of equipment, materials and personal protective equipment.
- Take prompt corrective action when unsafe conditions, practices or equipment are reported or observed.
- Promptly report health and safety concerns to their supervisor and/or Environmental Health and Safety.
- Complete and submit an OSU Employee Accident Report each time a work-related injury or illness occurs.

STANDARD 1
Injury and Illness Recordkeeping

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR Part 1904

Applies to:

All OSU Departments and Employees.

Employee Responsibilities:

All university employees are required to report work related accidents, exposures and illnesses using an OSU Employee Accident Report (EAR) in a timely manner. The OSU EAR and Instructions for medical treatment and completing the form are available on the instructions page of the EAR. All Employee Accident Forms are to be submitted to:

University Health Services (previously known as Employee Health Services)
McCampbell Hall - 2nd floor
1581 Dodd Drive
(614) 293-8146
(614) 293-8018 (Fax)

Hours: Monday–Friday, 7:30 a.m. to 4 p.m.

Departmental Responsibilities:

Ohio public employers are required to maintain files of Employee Accident Reports and include recordable accidents (those requiring more than first aid or causing doctor recommended restricted duties or time away from work) on a PERRP300 injury and illness recordkeeping form each calendar year. At The Ohio State University, PERRP required logs are maintained by the Office of Human Resources (OHR). Recordable employee accident information must be added to the PERRP300 form within six days of the incident.

In addition to maintaining the PERRP300 form, a PERRP300AP (Summary of Work Related Injuries and Illnesses form) must be completed by February 1 of each year, regardless of the number of recordable employee accidents (this is completed by EHS and OHR). EHS will send this form to the State of Ohio as part of the OSU PERRP300AP by January 31st each year. EHS will also provide departments with a copy of their PERRP300AP form for posting; this form is required to be posted in a public area from February 1 through April 30 each year. These duties are referred to as OSHALog Coordinator and are the responsibility of the OSHA Coordinator or designee.

Departments are also required to display a PERRP Information Poster to inform employees of their rights and responsibilities.

Resources:

OSU Employee Accident Report

Employee Accident Reporting

Ohio PERRP Poster

STANDARD 2
Building Emergency Action Plans (BEAPs)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.38
Ohio Fire Code 1301:7-7-04 (D) Section 404

Applies to:

All OSU Employees/Facilities.

BEAPs are designed to assist personnel in preparing for building emergencies.

Employee Responsibilities:

Become familiar with the BEAP and attend BEAP training. Training is available through the EHS website or in person by contacting EHS at 614-292-1284. Follow procedures outlined in the BEAP.

Departmental Responsibilities:

Administrative units must ensure their facilities have a completed Building Emergency Action Plan, and ensure it is updated annually. A BEAP template is available to help complete the plan. The OSU BEAP was developed to help maintain organizational and procedural framework for emergency situations. Due to the unique and vast differences in emergency situations and procedures for evacuations, the BEAP does not cover all situations; however, it does provide guidelines necessary to help with most of them.

BEAPs are coordinated through Public Safety, Emergency Management and Fire Prevention. Contact Bob Armstrong at 614-247-4276 for additional information or for assistance completing a BEAP.

Resources:

EHS BEAP Website

EHS Training

OSU Emergency Procedures

OSHA Emergency Action Plans Standard

OSHA Etool

STANDARD 3
Hazard Communication Program

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.1200

Applies to:

All University Employees.

The purpose of the Hazard Communication (HazCom) Program is to ensure employees are aware of hazardous chemicals in the workplace and are provided information regarding the potential hazards associated with exposure to these chemicals. The HazCom program also provides information for compliance with the Global Harmonized System of Classification and Labeling of Chemicals (GHS). The GHS is a logical and comprehensive approach to defining health, physical and environmental hazards of chemicals; creating classification processes that use available data on chemicals for comparison with the defined hazard criteria; and communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).

Employee Responsibilities:

Attend Hazard Communication and GHS Training through the EHS website or in person by contacting EHS at 614-292-1284. Become familiar with chemical hazards in the workplace and what to do in case of an accident or exposure involving them. Know where Safety Data Sheets (SDS) are located, how to access them and how to read them.

Departmental Responsibilities:

Develop and implement a departmental Hazard Communication Program. Assign someone to complete and maintain a chemical inventory and ensure a SDS is available, either in a departmental file or binder; or online through the EHS MSDS (SDS) search program, for each chemical. This assignment can be for the entire administrative unit or sub-unit, such as individual shops or laboratories, depending on size. Ensure all employees are informed of the chemical hazards in their workplace and have received training and are familiar with all parts of the program. Maintain training records.

Resources:

EHS Hazard Communication Program Website

OSU Hazard Communication Program Template

Global Harmonized System Poster

PERRP Hazard Communication

OSHA Hazard Communication Standard

OSHA Hazard Communication Fact Sheet

Standard 4
Occupational Exposure to Hazardous Chemicals in Laboratories

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.1450

Applies to:

University Employees working in Laboratories with Hazardous Chemicals.

The purpose of this standard is to ensure employees who work in laboratories are protected from hazardous chemicals. Chemical safety involves all phases of chemical use from procurement, storage, transportation, manipulation, decontamination and disposal.

The Chemical Hygiene Plan (CHP) development tool should be used to develop a laboratory specific plan which is required for all laboratories with hazardous substances. Laboratory Safety training is available online or by contacting EHS at 614-292-1284. A Chemical Exposure Monitoring Program has been developed to ensure employees are not being exposed to levels above Permissible Exposure Limits (PELs). Medical Surveillance, due to exposures, may be necessary and is provided through University Health Services.

Laboratory safety inspections are conducted routinely to help determine compliance with Federal and State regulations and to promote a culture of safety.

Employee Responsibilities:

Before working with chemicals, personnel should familiarize themselves with the hazards and potential risks associated with them. The chemical's toxicological and physical hazards should be evaluated and the appropriate precautions taken to eliminate or reduce the inherent risks. Employees should be familiar with the Chemical Hygiene Plan, know locations of Safety Data Sheets and attend appropriate training. Unsafe conditions should be brought to the attention of the principal investigator (PI).

Departmental and Principal Investigator Responsibilities:

Departments and/or laboratory PIs are responsible for assigning personnel to ensure exposures are at or below PELs and implementing measures to eliminate or control workplace hazards. This is accomplished through employee exposure determinations; development and implementation of a Chemical Hygiene Plan; development of Standard Operating Procedures (SOPs); employee information and training; medical

consultation and examination; hazard identification; use of personal protective equipment; and recordkeeping.

PIs are responsible to ensure the CHP is accessible to all employees; appropriate signage is used at the entrance to and within the laboratory; an evacuation map is available in each laboratory; training is provided and records maintained for the PI and all personnel; chemical inventory and safety data sheets are maintained and accessible; all containers are labeled; special procedures are developed and shared; and ensure enrollment of laboratory personnel in appropriate medical surveillance programs through Employee Health Services for employees needing medical consultations. PIs should contact EHS for an exposure assessment when there is reason to believe employees are exposed to harmful levels of hazardous chemicals. PIs shall ensure all Institutional Animal Care and Use Committee (IACUC) protocols are followed when using hazardous chemicals during animal research.

Resources:

Chemical Hygiene Plan

Chemical Monitoring Program

SDS Search

OSHA Laboratory Safety Chemical Hygiene Plan Fact Sheet

STANDARD 5

Bloodborne Pathogens

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.1030

Applies to:

Employees who could have an occupational exposure to human blood or other potentially infectious materials while performing their job duties.

Bloodborne pathogens are infectious microorganisms present in the blood that can cause disease in humans. These pathogens include, but are not limited to hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV). Occupational Safety and Health Administration (OSHA) requires employers to implement safeguards to protect workers against the health hazards associated with blood and other potentially infectious materials. The OSHA standard covers all employees who could be "reasonably anticipated" to have an eye, mucous membrane, or parenteral (e.g. needle stick) contact with blood or other potentially infectious materials (OPIM) while performing their job duties. Workers that may have exposure to blood or OPIM include, but are not limited to nurses, research lab associates, laboratory technologists, first responders and physicians. Bloodborne pathogen training is available online or by contacting EHS at 614-292-1284.

Employee Responsibilities:

Follow universal precautions to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials. Ensure employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment. Attend appropriate training and follow procedures for safety.

Departmental Responsibilities:

Departments with employees who have the potential for bloodborne pathogen exposures must develop and implement a written Exposure Control Plan and make it accessible to affected employees. In addition to an Exposure Control Plan, research laboratories are required to have a site-specific Appendix to determine which employees are reasonably expected to have an occupational exposure to blood and other potentially infectious materials. Both the Exposure Control Plan and Site-specific Appendix must be reviewed and signed off on annually. Ensure employees are

provided training; have and use the proper PPE; and use specific exposure controls based on the hazards.

Departments with laboratories involved in the handling of infectious agents are required to ensure the University Biosafety Manual is distributed to all individuals in the laboratory and written acknowledgment of understanding by these individuals is maintained by the principal investigator. Training shall be provided for the handling and disposal of infectious agents and records maintained. Ensure project personnel participate in a medical surveillance program (including appropriate vaccinations) and that Employee Health Services knows of all infectious agents used in the laboratory. Departments shall ensure a protocol covering the use of infectious agents has been submitted to and approved by the Etiologic Agent Committee before laboratory work commences. Ensure all Institutional Animal Care and Use Committee (IACUC) protocols are followed.

Resources:

EHS Bloodborne Pathogens

Exposure Control Plan

Site Specific Appendix

OSHA Bloodborne Pathogens Standard Fact Sheet

OSHA Bloodborne Pathogens and Needlestick Prevention

Standard 6
Personal Protective Equipment (PPE)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910 Subpart I
- 1910.132 General Requirements
- 1910.94 Ventilation
- 1910.95 Occupational Noise Exposure
- 1910.120 Hazardous Waste Operations and Emergency Response
- 1910.133 Eye and Face Protection
- 1910.134 Respiratory Protection
- 1910.135 Head Protection
- 1910.136 Foot Protection
- 1910.137 Electrical Protective devices
- 1910.138 Hand Protection
- 1910.146 Permit-Required Confined Spaces
- 1910.252 Welding, Cutting and Brazing
- 1910 Subpart Z Toxic and Hazardous Substances

Applies to:

All OSU employees required to use PPE to complete their assigned work duties.

Certain job tasks at OSU require the use of PPE by employees. A job hazard analysis (JHA) should be conducted to determine which PPE is necessary based on recognized hazards. Administrative and/or engineering controls should be the first line of defense when protecting employees; however, PPE is necessary when administrative and/or engineering controls are not sufficient.

Examples of recognized hazards include, but are not limited to, chemical exposures; radiological exposures; sharp objects; excessive noise; heavy objects; fall hazards; flying debris; overhead hazards; laser energy or other non-ionizing radiation; or any other hazard which may cause injury, illness or impairment by inhalation, absorption, ingestion, injection or mechanical action.

Employee Responsibilities:

Employees required to use PPE should understand the selection process including choosing the proper PPE for the job task; how to properly use, adjust, maintain, clean and replace their PPE; know how to properly wear and adjust PPE; that a job hazard analysis should be completed for their job duties; that damaged or defective equipment is not used; and that training and support is available in all aspects of PPE use. Questions about PPE use or the need for PPE should be directed to the supervisor.

Departmental Responsibilities:

Departments with employees who have exposures that cannot be controlled using administrative or engineering controls and thus requiring the use of PPE must ensure job hazard analyses are completed and made available to employees. Job hazard analyses will determine the need for and proper types of PPE. Departmental supervisors are required to ensure employees who need PPE are provided with them as well as information on the proper use, care and limitations for each. If employees use their own PPE, ensure they are appropriate for the hazard involved. Ensure supervisors and employees are provided training to identify hazards and the need for PPE. Ensure employees are re-trained when new hazards are introduced, changes in worksite practices occur, or previous training or practices are ineffective. Maintain all training records.

Provide, at no cost to employees, PPE which is to be used exclusively on the job. Make available for training all affected faculty, staff, graduate assistants and other employees.

Resources:

Job Hazard Analysis Form

PERRP PPE

OSHA PPE

OSHA PPE Fact Sheet

STANDARD 7
Respiratory Protection Standard

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.134

Applies to:

University employees who use respiratory protection while performing job duties.

The purpose of this standard is to ensure, in the absence of administrative or engineering controls, employees are protected from occupational illnesses or diseases caused by breathing air contaminated with harmful dusts, mists, fogs, fumes, gases, smokes, sprays or vapors. The respiratory protection program requires training; fit testing; a written program; hazard assessments; respirator maintenance and medical surveillance.

EHS administers a written OSU Respiratory Protection Program. EHS provides respiratory protection training and fit-testing; and collaborates with University Health Services to ensure required questionnaires and medical surveillance are provided. Exposure evaluations and monitoring are provided by EHS upon request to determine the need for engineering controls and respiratory protection.

Employee Responsibilities:

Employees who use respiratory protective equipment are required to comply with the policies and procedures found in the written Respiratory Protection Program (i.e., medical surveillance, training, PPE use, etc.). Job-site and job-task specific procedures may be in place and used for each department and task requiring respiratory protection and should be addressed in department specific standard operating procedures (SOPs).

Departmental Responsibilities:

Departments with employees required to wear respirators must provide the applicable and suitable equipment (i.e., respirators, cleaning supplies, spare parts, etc.) for the purpose intended. The provision of respirators for voluntary use (no documented need) by employees will be at the discretion of EHS and the employees' department.

Departments with employees using respirators must have departmental personnel responsible for the following:

- Implementing and overseeing the Respiratory Protection Program within the department.

- Supervising those required to wear respiratory protective equipment.
- Ensure proper respirators are provided and used appropriately.
- Assist the EHS Program Administrator in coordinating fit testing.
- Identification of harmful exposures that might require respiratory protection.
- Maintain all records including medical releases, respiratory training and fit testing.
- Maintain a physical inventory for all processes which require the use of respiratory protective devices.

Resources:

OSU Written Respiratory Protection Program

PERRP Respiratory Protection

OSHA Respiratory Protection

OSHA Respiratory Protection eTool

STANDARD 8
Elevated Work (Aerial Lifts/Ladders/Scaffolding, etc.)
Walking Working Surfaces (Physical Hazards)

Regulation(s):

Ohio House Bill 308

OSHA 29 CFR 1910 Subpart D Walking Working Surfaces
1910.21 - Definitions.
1910.22 - General requirements.
1910.23 - Guarding floor and wall openings and holes.
1910.24 - Fixed industrial stairs.
1910.25 - Portable wood ladders.
1910.26 - Portable metal ladders.
1910.27 - Fixed ladders.
1910.28 - Safety requirements for scaffolding.
1910.29 - Manually propelled mobile ladder stands and scaffolds (towers)
1910.30 - Other working surfaces

1910 Subpart F - Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms
1910.66 - Powered platforms for building maintenance
1910.66 App A - Guidelines (Advisory)
1910.66 App B - Exhibits (Advisory)
1910.66 App C - Personal Fall Arrest System (Section I -Mandatory; Sections II and III - Non-Mandatory)
1910.66 App D - Existing Installations (Mandatory)
1910.67 - Vehicle-mounted elevating and rotating work platforms
1910.68 - Manlifts

Applies to:

University employees and contractors utilizing equipment to perform elevated work on OSU property.

Elevated work (conducted above the substrate) poses a safety hazard if the equipment is not utilized and maintained properly. Equipment used to vertically elevate a worker above the substrate includes, but is not limited to, aerial devices (i.e. scissor lifts, aerial lifts, boom buckets), scaffolding and ladders. The purpose of the elevated work program is to provide safety related information to users of these devices and minimize injuries as a result of improper use.

EHS has provided an Elevated Work Safety Program and is available to provide training and program implementation assistance to all OSU departments.

Employee Responsibilities:

OSU employees with responsibilities involving elevated work must be appropriately trained in the contents of the Elevated Work Program; be knowledgeable of the specific equipment they work with and be able to recognize hazards and equipment deficiencies related to elevated work. Staff will not use elevated work equipment when it is not safe to do so and will report all unsafe conditions to their supervisors and/or EHS.

Departmental Responsibilities:

Responsibilities of the department include Elevated Work Program implementation; maintenance of equipment; training of personnel assigned to conduct elevated work; and inspections and safe use of equipment. In addition, all departments will assign a competent person for this program area.

The competent person is a departmental employee who is experienced, trained and competent with elevated work equipment through appropriate training and hands-on experience. The competent person is responsible for implementation and annual review of the Elevated Work Program including updates and revisions as necessary and to ensure departmental employees have received the proper elevated work training, prior to use of equipment.

Resources:

OSU Elevated Work Safety Program

PERRP Fall Protection

OSHA Walking Working Surfaces

STANDARD 9
Fall Protection Standard

Regulation(s):

Ohio House Bill	308
OSHA 29 CFR	1926 Subpart M
	1926.500 - Scope, application, and definitions
	1926.501 - Duty to have fall protection
	1926.502 - Fall protection systems criteria and practices
	1926.503 - Training requirements
ANSI/ASSE	Z359 Fall Protection Code

Applies to:

University employees who are required to conduct work where fall hazards exist (above 5 feet) or are exposed to fall hazards while performing job duties

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The purpose of this standard is to outline the fall protection requirements to minimize/eliminate fall related injuries.

It is the policy of The Ohio State University (OSU) to take precautions to eliminate fall hazards from elevated work locations. The OSU Fall Protection Program prescribes the duty to provide fall protection; sets the criteria and practices for fall protection; and outlines required training and recordkeeping.

Employee Responsibilities:

Employees working where fall hazards exist must comply with the provisions of the Fall Protection Program including the use of personal protective equipment (PPE), fall protection equipment and rescue systems/operations; completion of equipment inspections; training; and reporting of any concerns related to fall protection.

Departmental Responsibilities:

The working unit responsible for each building where fall protection is provided shall be responsible for implementing the fall protection program and ensuring specific fall hazards are identified and adequately controlled through engineering and/or administrative controls. In addition, working units (departments) shall assign a "competent individual/person" responsible for departmental fall protection program administration, implementation and maintenance including equipment inspections, inventory, training and recordkeeping.

Fall Protection Departmental Competent Person Responsibilities:

Employees delegated the competent person shall be responsible for the oversight, implementation and management of the departmental fall protection program including:

- Being knowledgeable through training and experience of applicable fall protection standards and regulations applicable to their operation(s).

- Conduct fall hazard surveys (job hazard analyses) to identify fall hazards before authorized persons are exposed to fall hazards.

- Have the authority to stop work immediately if it is determined unsafe to proceed.

- Prepare, update and review written fall protection procedures and ensure a written rescue plan is developed for situations where fall hazards exist.

- Specify in written fall protection procedures the systems in place to include anchorage points, connecting means and other fall protection equipment that authorized persons are required to use when exposed to a fall hazard.

- Supervise the selection, installation, use and inspection of noncertified anchor points.

- Verify the fall protection systems are installed and inspected in compliance with the Fall Protection Program and applicable standards.

- Verify and ensure all authorized persons working at heights are trained and authorized to do so.

- Ensure a prompt rescue of authorized persons can be accomplished through adequate rescue operations.

- Participate in investigations of all incidents related to falls from elevated work surfaces.

- Immediately remove from service any fall protection equipment found defective or subjected to forces as a result of a fall from elevated work.

- Inspect fall protection equipment as recommended by the manufacturer and specified in this plan and ensure inspections by qualified persons are conducted as required.

Resources:

OSU Written Fall Protection Program

PERRP Fall Protection

OSHA Fall Protection

OSHA Stop Falls

ANSI Fall Protection Code

STANDARD 10
Confined Space Entry Standard

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.146

Applies to:

OSU Employees required to enter or monitor confined spaces.

This program contains the procedures and practices for safe entry into locations classified as permit-required and non-permit required Confined Spaces at The Ohio State University. A confined space is not intended or designed primarily as a place of work, may have restricted means for entry and exit, may have an atmosphere which could be harmful (chemical, toxic, flammable), vapors may not have sufficient oxygen levels and/or could cause engulfment. Examples of confined spaces include manholes, vaults, tanks, tunnels, boilers, silos, bins, pits, crawl spaces, storm/sanitary drains and sumps. Employees may be required, as part of their job duties, to enter these spaces to perform inspection, repair or maintenance activities.

Employee Responsibilities:

Employees who enter confined spaces are considered authorized entrants and are responsible for complying with provisions outlined in the OSU Written Confined Space Entry Program. These employees are expected to complete Confined Space Entry Training; be knowledgeable of confined space locations and hazards; understand what constitutes a hazardous condition or atmosphere; and emergency procedures. Before entering a permit-required confined space, employees are responsible for completing and posting a Confined Space Entry Permit and utilizing proper communication with an attendant to ensure information is accurately and frequently provided.

The attendant oversees the confined space entry without entry into the space. In addition to the aforementioned employee responsibilities, attendants are responsible for understanding what constitutes a hazardous condition or atmosphere in a confined space; how to identify when a hazardous condition is present; and emergency procedures to be followed if an emergency occurs. The attendant should also be knowledgeable of the signs and symptoms of exposure to hazardous materials; maintain an accurate count of authorized entrants and communicate with authorized entrants to ensure safety. Attendants ensure efficient exit from the confined space by all entrants in the event of an unsafe condition or once work is complete; ensures prompt rescue of an authorized entrant in the event of an emergency or unsafe condition where the entrant is unable to perform self-rescue and ensures unauthorized personnel do not enter the confined space during work.

Departmental Responsibilities:

Departments with employees who are expected to enter confined spaces are required to have a written confined space entry program. Departmental and supervisor responsibilities include:

- Ensure employees are properly trained prior to entering a confined space.
- Ensure all confined spaces in their assigned areas are properly identified by the appropriate signage and ensure they are properly secured from unauthorized entry.
- Ensure rescue procedures are in place for each permit-required confined space entry.
- Determine if changes made to a non-permit required confined space may present additional hazards and be reclassified to a permit required confined space.
- Maintain all records for confined spaces including location specific details, entry permits, maintenance activities and employee training records.
- Provide the proper equipment for entry and rescue from confined spaces.
- Ensure employee safety during entry in confined spaces by providing the proper personal protective equipment, rescue equipment and atmospheric monitoring equipment.

Contractors entering confined spaces must do so as outlined in this program and in accordance with applicable OSHA regulations. Contractors are responsible for their own safety programs and must have a written confined space program that complies with the regulations pertinent to the areas to be entered. Contractors are also responsible for supplying any equipment necessary to perform safe entry into a confined space. Contractors must have the appropriate entry permit posted during confined space entry and may utilize the OSU form, if necessary.

Resources:

OSU Confined Space Written Program

OSU Confined Space Entry SOP

OSU Confined Space Entry Permit

Permit Required Confined Space Decision Tree

OSHA Confined Space Standard

Ohio BWC Confined Space Entry

STANDARD 11
Control of Hazardous Energy Sources - Lockout/Tagout (LOTO)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.147

Applies to:

All OSU Employees required to service or maintain machines and/or equipment that could release stored hazardous energy and cause injury; and, employees who need to recognize lockout/tagout devices and hazards.

The purpose of the Lockout/Tagout Program is to ensure OSU employees are protected while servicing and/or maintaining machines or equipment which, in the event of an unexpected start-up or energization, could release stored energy and cause injury to employees.

The intent is to ensure equipment is de-energized and isolated from all potentially hazardous energy sources and locked out (and tagged – labeled) before employees perform service or maintenance tasks where the unexpected energizing, start-up, or release of stored energy could cause injury.

Employee Responsibilities:

Employees are responsible for following all procedures outlined in the OSU Lockout/Tagout Safety Program; they should never service and/or maintain energized equipment/machinery without following all aspects of the program. These employees are expected to complete Lockout/Tagout training to ensure they know, understand and follow applicable provisions (the employer's energy control program; the energy control procedures relevant to their duties or assignments; and the various requirements of the OSHA standards related to lockout/tagout).

Employees are expected to be knowledgeable of equipment and hazards requiring the use of lockout/tagout and understand what constitutes a hazardous condition. Before servicing or maintaining energized equipment or machinery, employees are responsible for ensuring they are appropriately locked (to prevent energization) and tagged (to communicate work being done on energized equipment).

Employees should never:

- Attempt to operate or energize any energy-isolating device that is locked and or tagged out.
- Service and/or maintain energized equipment/machinery without first following all lockout/tagout requirements.

- Tamper with any lockout device or tag.

Employees should always:

- Report violations to their immediate supervisor and/or Environmental Health and Safety.
- Properly identify and perform lockout/tagout on all hazardous energy sources.
- Notify affected employees that lockout/tagout activities will be conducted.
- Follow specific lockout/tagout procedures for equipment and machinery.

Departmental Responsibilities:

Departments with employees who are expected to conduct work on energized equipment and/or machinery are required to have a written Lockout/Tagout Safety Program. Departmental and supervisor responsibilities include:

- Implement a Written Lockout/Tagout Program for the administrative unit.
- Ensure employees are properly trained prior to conducting service on equipment storing hazardous energy. Training on specific procedures for particular equipment should be provided.
- Provide the appropriate Lockout/Tagout equipment (locks and tags).
- Identify all equipment and processes that may contain energy (this could include electric, chemical, pneumatic, hydraulic and others). Maintain a database of this equipment.
- Develop specific procedures for de-energizing equipment identified and maintained in the database.
- Maintain records relating to employee training, lockout/tagout equipment and when energized equipment is maintained and/or repaired.
- When purchasing new equipment that will require locks and/or tags for maintenance and/or repair, ensure they are designed for using lockout tagout locks and equipment.
- Maintain a list of authorized employees, i.e., those who perform lockout/tagout.
- Ensure contractors are familiar with OSU Lockout/Tagout policies and procedures and provide a copy of the departmental plan to contractors.

Contractor Responsibilities:

- Before any work is performed by a contractor, they shall be informed of and be provided with a copy of the departmental lockout/tagout plan.
- Contractors are required to have their own Lockout/Tagout Program that complies with all required OSHA standards.
- Contractors must follow both their own and OSU Lockout/Tagout Programs and ensure neither causes unsafe conditions to themselves or OSU employees.
- Contractors must notify the affected OSU departments prior to conducting service on equipment requiring lockout/tagout.

Resources:

OSU Lockout/Tagout Written Program

OSU Lockout/Tagout Checklist

OSU Electric Safety Program

OSHA Lockout/Tagout

OSHA Lockout/Tagout Fact Sheet

Ohio BWC Lockout/Tagout Program

STANDARD 12
Occupational Noise Exposure Standard

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.95

Applies to:

All OSU Employees required to work in noisy environments and/or where their average exposure to noise exceeds 85 decibels over an 8-hour time weighted average.

The purpose of the Hearing Conservation Program is to ensure OSU employees are protected from exposure to excessive noise in the event that engineering or administrative controls are not feasible.

The intent is to ensure compliance with regulatory standards and ensure employees are protected while in the presence of loud noises.

OSHA sets legal limits on noise exposure in the workplace. These limits are based on a worker's time weighted average over an 8-hour day. OSHA's permissible exposure limit (PEL) for noise is 90 A-weighted decibels (dBA) for all workers for an 8-hour day. The OSHA standard uses a 5 dBA exchange rate meaning when noise levels are increased by 5 dBA, the amount of time a person can be exposed is cut in half.

Employers are required to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an 8-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training and conduct evaluations of the adequacy of the hearing protectors.

Employee Responsibilities:

Employees are responsible for wearing and maintaining hearing protective devices as instructed. Employees exposed to excessive levels of noise must also participate in the OSU Hearing Conservation Program which includes annual training and annual medical surveillance (audiometric testing). Employees shall notify their supervisor and/or EHS if they suspect an area may be a high-noise area (≥85 dBA). Additionally, employees shall use the appropriate personal protective equipment (PPE) (ear plugs, ear muffs, etc.) when excessive noise exposures are present.

Departmental Responsibilities:

Departments with employees who are expected to conduct work in excessive noise areas are required comply with the OSU Written Hearing Conservation Program. Departmental and supervisor responsibilities include:

- Report areas with suspected excessive noise levels to EHS (for exposure monitoring).
- Attempt to eliminate excessive noise exposures through engineering or administrative controls.
- Ensure excessive noise areas are properly marked.
- Provide PPE (ear plugs, ear muffs, etc.) to employees required to work in excessive noise areas. Ensure the proper use of the PPE.
- Ensure employees have received Hearing Conservation Program Training.
- Maintain training and exposure records.
- Ensure employees are referred to University Health Services for medical surveillance and audiometric testing.
- Notify EHS when changes occur (different equipment, different employees, etc.).
- Notify contractors of high-noise areas.

University Health Services Responsibilities:

University Health Services (formerly known as Employee Health Services) is responsible for:

- Providing medical surveillance to employees exposed to loud noises.
- Providing baseline and annual audiograms.
- Providing ongoing medical surveillance and identify standard threshold shifts.

Environmental Health and Safety (EHS) Responsibilities:

EHS is responsible for:

- Developing and maintaining the OSU Hearing Conservation Program.
- Provide noise level determinations and monitoring to determine employees at risk.
- Develop and provide Hearing Conservation Program Training.

Resources:

OSU Hearing Conservation Program

OSHA Noise Standard

Ohio BWC Hearing Conservation Program

STANDARD 13
Hot Work (Welding, Cutting and Brazing)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.252
1910.254

Applies to:

All OSU Employees and Contractors conducting hot work (welding, cutting and brazing) where a potential for fire or injury exists.

The purpose for the hot work permit program is to ensure that spark and flame producing construction and maintenance activities do not present an undue fire hazard to the people and property of OSU.

Hot work includes any operation producing flame, sparks or heat. Examples of hot work include, but are not limited to, torch cutting, welding, brazing, grinding, sawing, torch soldering, thawing frozen pipes and applying roofing.

The intent is to ensure OSU facilities and personnel are protected while in the presence of hot work activities.

Employee Responsibilities:

- Attend the appropriate training to become an authorized employee (possess adequate knowledge to safely conduct hot work).
- Ensure the safe handling of cutting or welding equipment and safe use during the process.
- Determine the combustible materials and hazardous areas present or likely to be present in the work area.
- Protect combustible material from ignition by moving the hot work to a location free from dangerous combustibles; or, if not feasible, moving combustibles to a safe location or provide shielding to prevent ignition.
- Ensure hot work operations do not interfere with other operations in the area.
- Notify EHS of planned hot work and ensure appropriate hot work permits are complete prior to work.
- Ensure appropriate fire protection and extinguishing equipment are properly located at the site.
- Ensure a fire watch is present, when required.
- Ensure smoke/fire detection devices have been addressed.
- Ensure HVAC precautions have been addressed.

- Ensure the use of appropriate PPE during hot work operations.

Departmental Responsibilities:

Departments with employees who are expected to conduct hot work activities shall comply with the OSU Written Hot Work Program. Departmental and supervisor responsibilities include:

- Ensure employees conducting hot work have received proper training and are provided appropriate equipment and personal protective equipment to complete the job safely.
- Be capable of identifying hazards when hot work is anticipated.
- Ensure Hot Work Permits are completed and submitted to EHS for approval.
- Ensure hired contractors either have their own Hot Work Program (provide EHS with completed permits) or follow the OSU program.

Contractor Responsibilities:

Contractors are hired by the university to either make renovations or repairs to existing occupied facilities or to build or renovate unoccupied university facilities. All contractors hired to conduct hot work at The Ohio State University:

- Should either have their own written hot work program that fulfills all regulatory requirements or follow the OSU program.
- Contractors working in occupied OSU buildings shall notify EHS that hot work is being completed and provide copies of all hot work permits prior to commencing the work.
- Contractors working on new construction or renovating unoccupied university facilities shall follow their own hot work policies and procedures, which shall fulfill all regulatory requirements.

Resources:

OSU Hot Work Program

OSU Hot Work Checklist

OSU Hot Work Permit

OSHA Welding, Cutting and Brazing

OSHA Arc Welding

Ohio BWC Welding Safety

STANDARD 14
Shop Safety

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.212
1910.213

Applies to:

All OSU Employees required to work in shops; these shops may include machine, woodworking, maintenance and specialty.

The purpose of the Shop Safety Program is to eliminate hazards associated with the use of hand and power tools; and to ensure employees are properly trained to utilize these tools in a safe manner to minimize injuries related to their use in OSU shops.

The intent is to provide an overview of shop safety to minimize injury and/or accidents associated with shop activities including machine shops, wood shops, maintenance shops and specialty shops. Each type of shop presents specific safety hazards, which if not properly identified and addressed, can lead to injury. The OSU Shop Safety Program provides inspections and recommendations to shops for the hazards present.

Employee Responsibilities:

Employees working with hand machine shop equipment must be fully trained to ensure all applicable elements of the OSU Machine Shop Safety Program are followed. In addition, employees are responsible for completing adequate training, reporting equipment deficiencies; use of PPE; and safe use of machine shop equipment at all times.

Departmental Responsibilities:

Each department or working units within a department where machine shops are present are responsible for the following:

- Ensure the applicable components of the OSU Shop Safety Program are available to employees.
- Provide applicable training to employees expected to utilize hand and power tools as part of their job duties. Ensure training is completed by all employees.
- Ensure machine shop equipment is properly maintained and any equipment deficiencies are addressed to ensure employee safety.
- Maintain manufacturer manuals and other applicable documentation related to the equipment in use.

- Develop and implement Standard Operating Procedures for operations requiring specialized knowledge and/or skills.
- Inform employees and supervisors about the contents of the OSU Shop Safety Program.
- Identify authorized personnel to utilize equipment.
- Address safety hazards in a timely manner.
- Provide all appropriate personal PPE.
- Ensure appropriate safety programs are in place and implemented (i.e., Hearing Conservation, Hazard Communication, Respiratory Protection, Hot Work, etc.).
- Maintain all appropriate records, including training.
- Participate in the University Shop Inspection Program (managed by EHS). Notify EHS of shop locations and types to EHS.

Resources:

OSU Shop Safety Program

Ohio BWC Power Tools

Ohio BWC Woodworking Safety

Ohio BWC Machine Shops Manual

STANDARD 15
Contractor Safety

Regulation(s):

OSHA 29 CFR 1910

Applies to:

All OSU Colleges, Departments and Administrative Units that employ, or enter into contract with, contractors (employees not directly employed by OSU).

The University and its Colleges, Departments and Administrative Units often rely on contractors to provide a broad range of services from clerical to building construction and renovation. Contractors are obligated by Federal Law to comply with OSHA standards. Contractors who disregard their obligation under law to comply with safety standards place their employees at risk as well as OSU employees.

The purpose of this program is to ensure contractors and their employees comply with OSHA Standards for the protection of contract employees and for the protection of university faculty, students, staff and visitors.

The intent is to ensure the university is not placed at risk due to unsafe work practices by contractors.

University Responsibilities:

- Provide contractual language for inclusion in specifications for contract work relating to safety requirements.
- Provide protocols for resolution of contractor safety issues.
- Authorize shut down of contract work that places contract or university employees in immediate risk of serious physical harm or death.
- Ensure that contractors understand their safety responsibilities,
- Assure that discretionary responsibilities for contractor oversight and coordination at the Departmental or equivalent administrative unit level are clearly defined.
- Notify OSU EHS of safety issues regarding contract work.

Contractor Responsibilities:

- Develop and implement a safety plan that complies with all applicable safety and environmental standards.
- Ensure compliance with their safety plan.

- Provide all necessary equipment (PPE, etc.) to ensure the safety of their own employees and OSU employees, students and visitors.
- Comply with all OSU Policies, Procedures and SOPs relating to safety compliance.

Resources:

OSU EHS Occupational Safety and Industrial Hygiene

OSU Building Design Standards

OSU Vendor Resources

OSHA General Industry Standards

STANDARD 16
Powered Industrial Trucks (Forklifts)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.178
NFPA 505

Applies to:

All OSU staff members who operate and/or are responsible for forklifts and/or powered industrial trucks. Powered industrial trucks include forklifts, platform lift trucks, motorized hand trucks and other specialized industrial trucks powered by electric or internal combustion engines. Contractors using forklifts or powered industrial trucks on campus are responsible for following their own safety programs which comply with all applicable standards.

The purpose of the Forklift and Powered Industrial Truck Safety Program is to identify and eliminate hazards associated with the use of forklifts and powered industrial trucks; and to ensure employees are properly trained to utilize them in a safe manner to minimize injuries related to their use.

The intent is to provide an overview of forklift safety to minimize injury and/or accidents associated with their use. The OSU Forklift and Powered Industrial Truck Safety Program provides responsibilities, requirements, training, operation, inspection, maintenance, handling, storage and recordkeeping requirements.

Employee Responsibilities:

- Attend and pass classroom and evaluation of competence training prior to operating a forklift or powered industrial truck.
- Perform and document forklift/powered industrial truck pre-use inspections.
- Report all vehicle maintenance issues to his/her supervisor and removing the equipment from service if necessary.
- Operate and maintain equipment in a safe manner at all times.

Departmental Responsibilities:

Each department or working units within a department where forklifts or powered industrial trucks are used are responsible for the following:

- Designate and identify personnel authorized to operate forklifts and powered industrial trucks (do not allow unauthorized use of the equipment).

- Ensure authorized operators have received proper training and certification (every 3 years) prior to operating a forklift or powered industrial truck.
- It is the supervisor's responsibility to certify each operator.
- Ensure all safety and manufacturer regulations and instructions are followed.
- Ensure forklifts and powered industrial trucks are maintained in proper working order and repaired when necessary.

Resources:

OSU Forklift and Powered Industrial Truck Safety Program

OSU Forklift Operator Evaluation Form

Ohio BWC Forklift Safety

OSHA Powered Industrial Trucks

OSHA Forklift Etool

STANDARD 17
Nanoparticles

Regulation(s):

OSHA 29 CFR 1910.1450

Applies to:

All OSU staff members who handle, use, store and/or dispose of nanomaterials during research or other operations.

Nanotechnology is a practice which involves using nanoscale structures in order to create new materials and products. This procedure is advantageous in distinct medical and scientific fields, but could also be hazardous to individuals working with them. Studies have shown nanoparticles have the ability to travel into the body through distinct routes of exposure, specifically inhalation, and cause adverse health effects.

The purpose of this program is to minimize the risks associated with the hazards known when handling nanoparticles.

The intent is to provide an overview of nanomaterials safety and to minimize injury and/or accidents associated with their use.

Employee Responsibilities:

- Attend training on how to work with the specific nanoparticles they use.
- Know the hazards that correlate with the nanoparticles they are handling.
- Ensure proper engineering controls, administrative controls and PPE are being correctly utilized as determined by their PI or by the guidelines set by EHS.
- Notify their supervisor and/or EHS immediately if any employee feels their facility may be producing an unsafe work environment when working with nanoparticles.

Departmental Responsibilities (Supervisors and PIs):

- Implement and ensure the compliance with the Nanoparticle Safety Program within their facilities.
- Register their facility with EHS by completing the Nanotechnology Standard Operating Procedures/Registration Form (will not open in Chrome, use Internet Explorer). Develop SOPs for each material used; it should describe in detail how to perform daily operations in a safe and effective manner.
- Gather information about the nanomaterials used in their facility.
- Less hazardous forms of nanomaterials should always be selected if applicable.
- Safety Data Sheets (SDS) should be provided and reviewed.

- Determine potential risks. PI's and supervisors should determine if their operations pose a low, moderate or high potential for exposure to their employees. Risk determination levels can be found in the Nanoparticle Written Safety Program.
- Maintain training records for employees. PI's and supervisors must ensure their employees have taken and passed both The Ohio State University's Lab Standard and Nanotechnology training programs.
- PI's and supervisors are responsible for providing all employees at a minimum, the following information and training regarding nanomaterials:
    - Identification of nanomaterials that the employer uses and the processes in which they are used.
    - Results from any exposure assessments conducted at the work site.
    - Identification of engineering, administrative controls and personal protective equipment (PPE) necessary to reduce exposure to nanomaterials.
    - The use and limitations of PPE.
    - Emergency measures to take in the event of a nanoparticle spill or release.

Resources:

OSU Nanoparticle Safety Program

OSU Nanoparticle SOP

OSHA Occupational Exposures to Hazardous Chemicals

OSHA Working Safely with Nanomaterials

OSHA Health Effects and Workplace Assessments and Controls

OSHA Introduction to Nanomaterials

Nano Tool Kit

STANDARD 18
Lasers

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910 Subpart I
1910.132
1910.133

Applies to:

All OSU staff members who work with or around lasers in the workplace.

The purpose of the Laser Safety Program is to identify and eliminate hazards associated with the use of lasers; and to ensure employees are properly trained to utilize them in a safe manner to minimize injuries related to their use.

The intent is to provide an overview of laser safety to minimize injury and/or accidents associated with their use.

The associated safety risks involved with laser use vary from minimal for common low power devices, such as laser pointers and bar code readers, to very hazardous for the high power lasers used in many research labs and clinical environments. While safety ultimately rests on the end user, a number of control measures can be put in place to mitigate the risk of serious injury. Laser accidents may not happen often but the time and cost of implementing most control measures are small compared to the consequences of an accident that could result in a permanent loss of vision or maybe even worse.

Employee Responsibilities:

- Attend training on how to work with the specific lasers they use.
- Know the hazards that correlate with the lasers they are handling.
- Ensure proper engineering controls, administrative controls and PPE are being correctly utilized as determined by their PI or by the guidelines set by EHS.
- Notify their supervisor and/or EHS immediately if any employee feels their facility may be producing an unsafe work environment when working with lasers.

Departmental Responsibilities (Supervisors and PIs):

- Implement and ensure the compliance with laser control measures within their facilities.
- Register their facility with EHS by completing the Laser Registration Form.

- Develop SOPs using the Laser Standard Operating Procedure Form for each material used; they should describe in detail how to perform daily operations in a safe and effective manner.
- Gather information about the lasers used in their facility.
- Classify the lasers in use in their areas.
- Implement Laser Safety Control Measures.
- Maintain training records for employees. PI's and supervisors must ensure their employees have taken and passed both The Ohio State University's Lab Standard and Laser Safety training programs.

Resources:

Laser Classification

Control Measures

Biological Effects

Laser Eyewear

LS-1: Laser Registration Form

LS-2: Template for Laser Standard Operating Procedure

Rockwell Laser Industries

Encyclopedia for Photonics and Laser Technology

Kentek Laser Store

Laser Institute of America

OSHA -- Laser Safety

Laser Vision

Laser Shields

FDA -- Laser Products and Instruments

STANDARD 19
Accident Prevention Signs (OSHA Required)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910.145

Applies to:

All OSU departments where accident prevention safety signage is required by regulation or policy.

The purpose of the Accident Prevention Signs Program is to identify or minimize hazards by posting signs to ensure employees are properly notified in an effort to minimize injuries.

The intent is to ensure accident prevention signs are consistent in type and format throughout the university and utilized in accordance with OSHA standards.

Employee Responsibilities:

- Recognize hazard identification signs and follow precautions in areas identified with hazards.
- Report areas with missing or inappropriate signage to their supervisor.

Departmental and Supervisor Responsibilities:

- Ensure, where applicable or required, the appropriate sign or tag to convey safety messages to employees are obtained and posted.
- Ensure fiscal resources are allocated to provide signs.
- Ensure employees are instructed in the difference between the message conveyed by danger signs (immediate danger, precautions required) and caution signs (possible harm, precautions should be taken).

Resources:

OSHA Specifications for Accident Prevention Signs and Tags

OSHA Signs, Signals and Barricades

Free OSHA Signage (printable)

STANDARD 20
Training (Regulatory Required)

Regulation(s):

Ohio House Bill 308
OSHA 29 CFR 1910

Applies to:

All OSU staff members who are required to attend or provide regulatory mandated training programs.

The purpose of the Training Standard is to ensure employees receive appropriate training as identified in OSHA standards.

The intent is to identify required training identified by the results of job hazard analyses. As part of assigned responsibilities, employees may perform tasks or operations, which without proper training, may place the employees or bystanders at risk of injury. There are numerous hazardous operations specifically identified in OSHA Standards. These standards recognize the need to train employees on proper operating procedures for hazardous operations.

Employee Responsibilities:

- Attend classroom and/or online training programs as required by the supervisor based on identified hazards associated with job duties. These training sessions must be attended prior to working in areas or with equipment that required safety training.
- Request further training or assistance if initial training is misunderstood or needs clarified.

Departmental Responsibilities:

Each department or working units within a department where safety training is required are responsible for the following:

- Ensure job hazard analyses are conducted for each job classification in the working unit. This will identify classifications of employees who require training associated with College, Department and like unit equipment or operations.
- Ensure employees attend required training.
- Make available for training all affected faculty, staff, graduate assistants and other employees.
- Maintain training records for Colleges, Departments and like units.

EHS Resources:

- EHS can provide basic training programs for potentially hazardous operations to employees through classroom or online training programs.
- Maintain training records for programs offered through EHS.
- Assist with Job Hazard Analyses (JHAs).

Resources:

OSU EHS Training Programs

Ohio BWC Training Resources

Ohio BWC Division of Safety and Hygiene Training Center

OSHA Training Requirements in OSHA Standards and Training Guidelines

OSHA Training

OSHA Employers Training Obligations

STANDARD 21
Scientific Diving

Regulation(s):

OSHA 29 CFR 1910.401
1910 Subpart T Appendix B

Applies to:

All OSU staff members who participate in research diving.

The purpose of the Scientific Diving Standard is to ensure physical hazards associated with diving, as identified by OSHA standards, are abated.

Scientific diving is conducted for the advancement of science; thus, information and data resulting from the projects involved are non-proprietary. The tasks of a scientific diver are those of an observer and data gatherer. Construction and trouble-shooting tasks traditionally associated with commercial diving are not included within scientific diving. Scientific divers, based on the nature of their activities, must use scientific expertise in studying the underwater environment and, therefore, are scientists or scientists-in-training.

Commercial diving OSHA Standards do not apply to instructional programs using open-circuit, compressed-air SCUBA which are conducted within the no-decompression limits or to diving operations defined as scientific diving which are under the direction and control of a diving program containing at least the following elements (29 CFR 1910.401 Subpart T):

1) A Diving Safety Manual, which includes at a minimum:
    a. Procedures covering all diving operations specific to the programs.
    b. Procedures for emergency care (including recompression and evacuation).
    c. Criteria for diver training and certification.

2) A Diving Control (Safety) Board, with the majority of its members being active divers, which shall at a minimum have the authority to:
    a. Approve and monitor diving projects.
    b. Review and revise the diving safety manual.
    c. Ensure compliance with the manual.
    d. Certify the depths to which a diver has been trained.
    e. Take disciplinary action for unsafe practices.
    f. Ensure adherence to the buddy system (a diver is accompanied by and is in continuous contact with another diver in the water) for SCUBA diving.

Departmental Responsibilities:

- Contact the Office of Research and follow all policies and procedures relating to research diving.
- Develop, Implement and Enforce a Diving Safety Manual.
- Be responsible for identifying units which engage in scientific diving.
- Ensure fiscal resources are available to support the program.
- Ensure all affected faculty, staff, graduate assistants and other employees are properly trained.
- Ensure discretionary responsibilities for implementation at the Department or equivalent administrative unit level are clearly defined.
- See to the appointment of a Diving Control Board as directed by the standard.

Resources:

OSU Office of Research Diving Oversight

UCSC Scientific Diving Safety Program

American Academy of Underwater Sciences

Divers Alert Network

University of Maryland Scientific Diving Safety Manual

STANDARD 22
Minors in Hazardous University Environments

Regulation(s):

OSHA 29 CFR 1910

Applies to:

All OSU departments that have minors (those under 18 years of age) in work environments that pose chemical, physical, biological or radiological hazards.

The purpose of the Minors in Hazardous University Environments Standard is to provide guidance to university departments regarding environments where minors are not permitted to work due to hazards.

The intent is to provide an overview of minor employee and OSU Departmental responsibilities to minors in working environments. Minors in the workplace are protected by all OSHA/PERRP standards, if they are employees; additionally, the U.S. Department of Labor Employment Standards Administration Child Labor Provisions of the Fair Labor Standards Act provides information relating to hazardous conditions where minors are not permitted. These include:

- Manufacturing or storing explosives
- Driving a motor vehicle and being an outside helper on a motor vehicle
- Coal mining
- Logging and sawmilling
- Power-driven woodworking machines*
- Exposure to radioactive substances and ionizing radiations
- Power-driven hoisting equipment
- Power-driven metal-forming, punching, and shearing machines*
- Mining, other than coal mining
- Meat-packing or processing (including power-driven meat slicing machines)
- Power-driven bakery machines
- Power-driven paper-products machines*
- Manufacturing brick, tile, and related products
- Power-driven circular saws, band saws, and guillotine shears*
- Wrecking, demolition, and shipbreaking operations
- Roofing operations*
- Excavation operations*

* Limited exemptions are provided for apprentices and student-learners under specified standards.

Minor Employee Responsibilities:

- Follow all policies and procedures and safe work practices for safety in the workplace.
- Attend all necessary safety training.
- Wear proper safety gear (PPE) required to do the job safely.
- Report unsafe or hazardous conditions to a supervisor.
- Ask for help if necessary.

Departmental Responsibilities:

Employers have the primary responsibility for protecting the safety and health of their workers.

- Do not allow minors to work under hazardous conditions.
- Develop departmental policies relating to employing minors.
- Be responsible for identifying hazardous work conditions.
- Provide training about workplace hazards and required safety gear. Most safety training topics are available through EHS.
- Provide appropriate safety gear (PPE).
- Enforce and maintain documentation of enforcement of this regulation.
- Ensure minor employees have a working permit.

Resources:

US Department of Labor (Youth and Labor)

Ohio Department of Commerce Bureau of Wage and Hour Administration

Ohio Minor Labor Laws

OSHA Child Labor

OSHA Young Workers

OSHA Young Worker Safety in Restaurants Etool

STANDARD 23
Working Alone

Regulation(s):

OSHA 29 CFR 1915.84

Applies to:

All OSU staff members who work alone in hazardous locations.

The purpose of the OSU Working Alone Safety Program is to ensure university employees are aware of, and to the extent possible, protected from life-threatening situations that could be avoided as a result of not working alone. This program recognizes that working alone in situations involving the use of certain physical, chemical, radiological and biological agents potentially can result in workplace exposures that are immediately dangerous to life and health. These dangers can be avoided or limited through implementation of prudent safety practices that require a comprehensive evaluation of risks associated with the necessary tasks.

The intent is to educate employees to be able to identify hazards while working alone and eliminate, minimize or control them; provide assistance for workers working alone in the event of an accident or emergency; identify responsibilities; and recognize who should not work alone.

Some job functions at The Ohio State University will be performed by lone workers. This program is to encourage awareness and promote safe work procedures for employees who work alone. Working alone describes situations during the course of employment when an employee is:

- The only worker at the workplace.
- Not directly supervised by the employer.
- Working at a site where assistance is not readily available.
- In an area where direct contact with a co-worker or supervisor is not available.
- In a dangerous area (either due to work processes or likelihood of being robbed).
- Traveling away from the base office to meet clients.

Employee Responsibilities:

- Recognize hazards associated with the job and how to minimize them.
- Report hazards to supervisors.
- Work alone only when necessary. Reschedule assignments (when possible) to keep from working alone.
- Participate in a check-in system by contacting someone at regular intervals.

- Carry a personal alarm, cell phone or two-way radio. Ensure sufficient operation and battery life.

Departmental Responsibilities:

- Evaluate workplace exposures to physical, chemical, radiological and/or biological hazards to determine whether they are immediately dangerous to life and health.
- Communicate guidelines to employees, students and contractors through training programs.
- Ensure work performed alone or in isolation has a completed risk assessment that has been shared with the lone worker.
- Implement adequate control measures prior to approval of work.
- Consult and train staff, students and visitors that work alone.
- Provide communication devices such as cell phones, radios, personal safety alarms.
- Ensure employee health and safety.
- Ensure lone workers understand the risks associated with their work and that the necessary safety precautions are carried out.
- Provide guidance in situations of uncertainty.
- Implement controls to eliminate or control hazards prior to lone work.
- Supervise health and safety issues when checking the progress and quality of work; periodic site visits and discussions in which health and safety issues are raised.
- Provide video surveillance cameras, limit public access, lock all unused doors, coded cards or keys to control access to buildings, alarms, panic buttons, emergency phones, fire alarm or security guards when necessary.

Resources:

OSU Working Alone Safety Program

OSHA Working Alone

Canadian Center for Occupational Health and Safety Working Alone

UK Working Alone Safety

STANDARD 24
Medical Surveillance

Regulation(s):

OSHA 29 CFR 1910 Subpart H Hazardous Materials
1910 Subpart I Personal Protective Equipment
1910 Subpart Z Toxic and Hazardous Substances

Applies to:

All OSU staff members with occupational exposure to physical, chemical, biological or radiological hazards.

The purpose of this standard is to ensure employees are protected from occupational exposures through ongoing medical surveillance.

The intent is to provide the necessary information for employees and departments to comply with the numerous OSHA standards which mandate that the employer provide or make available access to a medical surveillance program. The purpose of these standards is to recognize that employees may be exposed to a variety of physical, chemical, biological or radiological hazards in the workplace. Medical surveillance programs provide a means to evaluate the success of workplace intervention strategies (e.g., personal protective equipment or engineering controls) and are successful in significantly reducing the frequency and severity of workplace injury and or illness.

Employee Responsibilities:

- Participate in the OSU Medical Surveillance Program, when required.
- Provide appropriate medical information through questionnaires provided through University Health Services (formerly Employee Health Services).
- Show up to and participate in medical appointments relating the Surveillance Program.

Departmental Responsibilities:

- Evaluate workplace exposures to physical, chemical, biological and radiological hazards.
- Identify employees who are subject to OSHA mandated medical surveillance.
- Provide medical surveillance through the University Health Services.
- Informs employees of their mandatory participation in medical surveillance programs.
- Ensure employees participate in the medical surveillance program in a timely manner.

- Ensure discretionary responsibilities for implementation at the Departmental or equivalent administrative unit are clearly defined.

Resources:

OSU HR Medical Examination Policy 4.40

OSHA Medical Screening and Surveillance

OSHA Hazardous Materials

OSHA Personal Protective Equipment

OSHA Toxic and Hazardous Substances

U.S. Department of Health and Human Services Medical Surveillance

STANDARD 25
Medical Surveillance for potential Occupational Exposure to Animals

Regulation(s):

OSHA 29 CFR 1910.1030
1910 Subpart H Hazardous Materials
1910 Subpart I Personal Protective Equipment
1910 Subpart Z Toxic and Hazardous Substances

Applies to:

Employees having direct contact with live animals; non-sanitized animal caging or enclosures; non-fixed or non-sterilized animal tissues, fluids or waste; animal equipment, devices or facilities for repairs/maintenance are required to participate in the medical surveillance program provided by University Health Services.

The purpose of this standard is to ensure employees with potential animal exposures receive appropriate medical surveillance based upon exposure criteria described in this policy.

The intent is to provide the necessary information for employees and departments to comply with regulatory standards which mandate that the employer provide or make available access to a medical surveillance program.

The University recognizes working with animals results in potential exposures to physical, biological, chemical and radiological hazards. Evaluation of the potential risks associated with each type of hazard is an essential part of risk assessment for all work processes. Recognition of the nature and extent of the risks associated with animal contact is essential to the providing of adequate worker protection. The nature and extent of these hazards may warrant periodic medical evaluation and training.

Employee Responsibilities:

- Participate in the OSU Medical Surveillance Program, when a potential for exposure to animals exists.
- Provide appropriate medical information through the Occupational Health Online Registry and other questionnaires provided through University Health Services (formerly Employee Health Services). Update the Occupational Health Online Registry as required.
- Show up to and participate in medical appointments relating to the Surveillance Program.
- Follow departmental and university policies.

Departmental Responsibilities:

- Ensure discretionary responsibilities for performing hazard evaluations of employee-animal exposure are clearly communicated at the department or equivalent Administrative Unit level.
- Evaluate workplace exposures to physical, chemical, biological and radiological hazards.
- Identify employees who may be subject to conditions that would warrant medical surveillance.
- Inform employees of their mandatory participation in medical surveillance programs.
- Enroll affected employees in the Occupational Health Online Registry.
- Ensure employees participate in the medical surveillance program in a timely manner.
- Review Occupational Health Registries to ensure identified risks and hazards are appropriate.

Resources:

EHS Animal Research Safety

OSU IACUC

OSU ULAR

OSHA Bloodborne Pathogens

STANDARD 26
First Aid Kits

Regulation(s):

OSHA 29 CFR 1910.151
1910.266 (Logging or Tree Trimming)
1910.269 (Electric Power Generation, Transmission and Distribution)

Applies to:

All OSU departments that provide first aid kits for employee use.

The purpose of the First Aid Kit Standard is to ensure first aid kits, if provided, contain the proper first aid equipment and are properly maintained.

The intent is to comply with the requirement of PERRP/OSHA that employers are required to provide medical and first aid personnel and supplies commensurate with the hazards of the workplace. The details of a workplace medical and first aid program are dependent on the circumstances of each workplace and employer. The intent of this is to provide general information that may be of assistance.

In most areas at OSU, First Aid Kits are not required to be provided due to the availability of medical and first aid services through the OSU Wexner Medical Center and University Health Services (formerly Employee Health Services).

However, in the course of their assigned responsibilities, employees may perform tasks or operations which may place the employee at risk of minor injury. OSU recognizes that certain departments will provide a minimum of supplies in a First Aid Kit to allow employees to treat basic first aid needs by his or herself.

On site, employer provided First Aid Kits require a minimum of supplies that would allow an individual to treat him or herself for basic first aid.

Minimum First Aid Kit Supplies:

- Absorbent compress, 32 sq. in. with no side smaller than 4 in. (1).
- Adhesive bandages, 1 in. X 3 in. (16)
- Adhesive Tape, 3/8 in. X 5 yd. (1)
- Antiseptic, 0.14 fl. oz. application (10)
- Burn Treatment, 1/32 oz. application (6)
- Medical Exam Gloves (2 pair)
- Sterile pad, 3 x 3 in. (4)
- Triangular Bandage, 40 x 40 x 56 in. (1)

Supplies of medication, such as decongestants, analgesics and antihistamines are not related to emergencies and are not recommended for First Aid Kits.

If more complex first aid equipment is desired, it shall be kept and maintained only by those personnel who have received advanced first aid training.

Employee Responsibilities:

- Conduct work using safe work practices and report hazards to the supervisor.
- Complete an Employee Accident Report and notify the supervisor of all workplace injuries; even those that only require first aid.
- Report to University Health Services or the OSU Wexner Medical Center Emergency Department if injuries require more than first aid.

Departmental Responsibilities:

- Determine where First Aid Kits will be provided.
- Maintain First Aid Kits and supplies (first aid kits are not required in all areas; however, if they are provided, they must be maintained – stocked with non-expired products). Ensure kits are kept stocked with appropriate supplies.
- Ensure this policy is disseminated within the College, Department and like unit.
- Ensure workplace injuries are formally evaluated by University Health Services to ensure prompt care, documentation and follow-up of the accident.
- Do not allow co-workers to be involved in the care of an injured worker's wounds because of concerns about exposure to blood and body fluids and requirements for training of workers, who are formally expected to render first aid care in the workplace.

Resources:

OSHA Medical and First Aid

OSU University Health Services (formerly Employee Health Services)

OSHA Workplace First Aid Program

ANSI Minimum Requirements for Workplace First Aid Kits

STANDARD 27
AEDs (Automatic External Defibrillators)

Regulation(s):

Ohio House Bill 717
OSHA 29 CFR 1910.1030 (Bloodborne Pathogens)

Applies to:

All OSU departments that have voluntarily chosen to acquire AEDs.

An Automated External Defibrillator (AED) is used to treat victims who experience sudden cardiac arrest. It is only to be applied to victims who are unconscious, not breathing normally and showing no signs of circulation such as normal breathing, coughing or movement. The AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and deliver a shock.

An AED should be used in conjunction with Cardio-Pulmonary Resuscitation (CPR) in cases of sudden cardiac arrest on campus, in accordance with accepted protocols, including those developed by the American Red Cross and American Heart Association. Use of the AED and CPR will continue as appropriate during the course of emergency care, until the patient resumes pulse and respiration, and/or local Emergency Medical Services (EMS) arrive at the scene, and assume responsibility for emergency care of the patient.

The ownership and use of an AED must be under the direction of a medical professional who can provide medical direction for use, write a prescription for use, review and approve guidelines for emergency procedures relating to use and evaluate post-event forms and electronic files downloaded from the AED.

This standard does not require the purchase and/or use of AEDs at OSU; it provides guidelines for departments that voluntarily decide to acquire them.

AEDs are not managed centrally at OSU; management of AEDs is required at the department level.

OSHA does not have standards specific to automated external defibrillators (AEDs). However, exposures to first-aid hazards are addressed in specific standards for the general industry.

AEDs are not required in the workplace; however, if they are provided, the following responsibilities apply:

Employee Responsibilities:

- Dial 911 to report medical emergencies.
- Attend CPR/AED training, when required by departmental policies.
- Follow departmental policies and procedures relating to the use of AEDs.
- Follow manufacturer instructions when using AEDs.
- If permitted by departmental policy, anyone can, at their discretion, provide voluntary assistance to victims of medical emergencies; the extent to which individuals respond shall be appropriate to their training, experience and comfort level.
- Use AEDs only if properly trained to do so.

Note: Ohio Law states that except in the case of willful or wanton misconduct or when there is no good faith attempt to activate an emergency medical services system, no person shall be held liable in civil damages for injury, death or loss to person or property; or held criminally liable for performing automated external defibrillation in good faith regardless of whether the person has obtained appropriate training on how to perform automated external defibrillation or successfully completed a course in cardiopulmonary resuscitation.

Departmental Responsibilities:

- Assign an AED Program Coordinator who is responsible for compliance with all AED policies and regulations; arranging personnel training; recordkeeping; maintenance and testing; and monthly and annual checks/assessments.
- Require expected users to complete successfully a course in automated external defibrillation and CPR that is offered or approved by the American Heart Association or another nationally recognized organization.
- Ensure all equipment and accessories necessary for support of medical emergency response are maintained in a state of readiness.
- Maintain and test the defibrillator according to the manufacturer's guidelines.
- Ensure, at a minimum, Monthly Monitor and System Checks are conducted including:
  - AED Operation and Status.
  - AED Battery Life.
  - AED Supplies.
- Ensure Annual Assessment are conducted including:
  - Training Records.
  - AED Operation and Maintenance Records.
  - AED Status.
  - AED Self-Diagnostic Check.
  - Check expirations dates for AED components (battery pack, electrodes, etc.).
  - Departmental policies and procedures relating to AEDs.
- Ensure coordination between a medical professional and the program coordinator.
- Maintain list of AED locations.

- Maintain all records relating to AEDs.
- Notify emergency medical services (Columbus Division of Fire) the location of defibrillators.
- Conduct post-event reviews.
- Ensure deficiencies are addressed and corrected.

Resources:

OSU Recreational Sports CPR/AED Training

American Heart Association AED Program Implementation

American Heart Association AED Program Q&A

U.S. Department of Health and Human Services AED Program

American Red Cross AED Education

American Red Cross CPR/AED Training

OSHA AEDs

Ohio House Bill 717

STANDARD 28
Legionella

Regulation(s):

OSHA 29 CFR 1910
Centers for Disease Control and Prevention
ANSI/ASHRAE 62-2004

Applies to:

All OSU staff members who staff members who work in areas or on equipment where the potential for Legionella exposure exists.

The purpose of this Legionella Exposure Control Plan is to specify the standard practices to be used by facility management to prevent legionellosis associated with building water systems. Legionellosis refers to two illnesses associated with legionella bacterium. When the bacterium Legionella causes pneumonia, the disease is referred to as Legionnaires' disease. Legionella can also cause a less severe influenza-like illness known as Pontiac Fever. Most all cases of legionellosis are the result of exposure to Legionella associated with building water systems.

The presence alone of Legionella bacteria in building water systems is not sufficient to cause legionellosis. Other factors including environmental conditions, water temperatures, biofilms, etc. and a means of transmitting the bacteria to people in the building via aerosol generation are necessary to cause outbreak of disease as a result of exposure. Legionellosis is contracted via inhalation of Legionella bacteria. Disease is not transmitted person-to-person and susceptible persons are more at risk for legionellosis including, but not limited to, the elderly, dialysis patients and persons with weakened immune systems.

The scope of this program outlines the following:

- Potential risks and preventative measures associated with building water systems including potable water systems (including emergency eyewash/shower stations); cooling towers and evaporative condensers; health care facilities; hotels; spas, hot tubs, & swimming pools; decorative fountains; and water aerosolizing equipment such as humidifiers.
- Responding to a legionellosis case/outbreak through environmental sampling and water treatment.
- Disinfection methods for the various types of building water systems within a facility.
- The development and contents of a Hazard Analysis and Critical Control Point Plan (HACCP) for a facility, or group of facilities.

Employee Responsibilities:

- Employees working in areas where there is an identified risk of Legionella exposure must be properly trained on all applicable elements of the OSU Legionella Exposure Control Plan.
- Utilize the appropriate PPE for the task being performed.
- Follow policies and procedures related to the types of PPE being used (i.e., OSU Respiratory Protection Program).

Departmental Responsibilities:

Each department with responsibilities for maintaining buildings or facilities where water systems are present are responsible for the following:

- Ensure the applicable components of the Legionella Exposure Control Plan are available to all affected employees.
- Provide applicable training to employees expected to work in, or with, building water systems where there is a potential risk of Legionella being present.
- Develop and maintain a Hazard Analysis and Critical Control Point Plan (HACCP) for all facilities under the direction of the work group.
    - The HACCP, which is described in detail within the Legionella Exposure Control Plan, involves facility managers to characterize the Legionella risk associated with a building and its potential occupants. If a Legionella risk is present, a hazard analysis must be performed to identify potential hazards, determine what hazard/exposure control methods are in place and any corrective actions to take if an exposure to Legionella occurs.
- Supervisors with employees who have responsibilities to work in areas where there is a risk of exposure to Legionella, must ensure employees are properly trained on the applicable contents of the Legionella Exposure Control Plan and are provided appropriate personal protective equipment (PPE) when conducting such work.
- Supervisors are required to ensure PPE is worn properly and safety programs are followed.

Resources:

OSU Legionella Exposure Control Plan

OSHA Legionnaires' Disease eTool

OSHA Legionnaires' Disease Technical Manual

CDC Legionella