

# Environmental Health and Safety Program Guide

January 2020



*Jeff Elliott, Garden City*

## ***Occupational Safety and Health Act of 1970***

“To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health.”

## ***Environmental Protection Act of 1970***

“Its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends.”

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# Environmental Health and Safety Guide Contents

Note: Hyperlinks are subject to change and may not work. Please report any broken links at:  
<https://www.ksre.k-state.edu/agsafe/feedback/index.html>

The Purpose	4
Occupational Health and Safety at K-State	4
K-State College of Agriculture Statement of Commitment	4
Training Providers	6
Accident Reporting	7
Aerial Lifts	8
Agriculture Safety	9
Animal (Farm) Handling Safety	10
Asbestos/Lead Safety	11
Bloodborne Pathogens Safety	12
Combustible Dust Safety	13
Compressed Gases/Air Safety	14
Confined Spaces Safety	15
Electrical Safety (LO/TO)/Generators	16
Emergency Planning and Response	17
Emergency Showers/Eye Wash	18
Ergonomics	19
Excavation Safety	20
Fall Protection (Personal Arrest System)	21
Farm Equipment Safety	22
Field Research and Sanitation	23
Fire Safety (Fire Extinguisher)	24
First Aid/CPR	25
Grain Industry Safety	26
Hand-Powered Tool Safety	27

---

---

Hazard Assessments (Safety Audits)	28
Hazard Communication (Chemical Safety)	29
Hazardous Waste Safety	30
Hearing Conservation	31
Heat/Cold Stress	32
Heavy Equipment Safety	33
Hoist/Sling Safety (Material Handling)	34
Hot Work/Welding Safety	35
Laboratory Safety	36
Ladder Safety	37
Machine Guarding	38
Motor Vehicle Safety (DOT Regulations)	39
Occupational Medicine Program	40
Office Safety	41
Personal Protective Equipment	42
Powered Industrial Truck Safety (Forklift and Pallet Jack)	43
Prescribed Burning Safety	44
Radiation/Laser Safety	45
Respiratory Protection	46
Scaffolding Safety	47
Shop Safety (Shop Signs)	48
Skid Loader Safety	49
Spill Prevention, Control, and Countermeasure (SPCC) Program	50
Tractor Safety	51
Utility Vehicle Safety	52
Walking and Working Surfaces	53
Worker Protection Standard	54
Additional Safety-Related Publications from K-State Research and Extension:	55



Dan Foster, Colby

## The Purpose

The purpose of the program guide is to assist you in accessing and understanding the programs available to you to create healthy and safe work environments for faculty, staff, and students. All programs identified can be found on the Environmental Health and Safety webpage located at <http://www.ksre.k-state.edu/agsafe/>. The Environmental Health and Safety office is available to provide guidance in program development.

## Occupational Health and Safety at K-State

Occupational safety and health is the responsibility of each employee at the university. In addition, each person of authority at the university is responsible for those employees under his or her supervision. This responsibility begins with the President and flows down to each person within the structure of the university. The personal and collective safety and health of students and employees are of primary importance. Cooperation among the administration, faculty members, staff members, and student body is necessary for the development and preservation of an enviable safety record. Effective standards, as well as proper attitudes, are required for the maintenance of workplace safety.

## K-State College of Agriculture Statement of Commitment

Kansas State University's College of Agriculture is committed to maintaining a healthy and safe environment for its students, faculty, staff visitors, and neighbors. We strive to foster a culture of safety and environmental protection among users of all our facilities.

Members of the College of Agriculture community should therefore comply with all environmental health and safety laws, regulations, and with current best practices; especially in laboratory and field settings. In addition, members of the community should commit to continuous improvement in their efforts to minimize adverse environmental impacts and safety risks by committing to a culture of safety in the College's operations by:

- Accepting the critical role each person has in protecting his or her own safety and occupational health, as well as that of others.
- Recognizing the critical importance of adherence to the highest standards for safety and occupational health for our students, staff, and the communities around us.
- Minimizing air and water pollution, and waste generation.
- Incorporating safety and environmental protection into all operations, including but not limited to experimental design, facility construction, and equipment specifications.
- Providing students and employees with health, safety and environmental education targeted to maximize safe work practices and to minimize the potential for injury or illness.



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- Creating an environment where individuals are able to recognize and to report errors without fear of reprimand or punishment.
  - Providing appropriate and timely information in response to questions or concerns about environmental health and safety issues.
  - Investigating incidents, disseminating lessons learned to faculty, staff and student workers, and modifying programs, as appropriate, to incorporate any potential improvements identified.
  - Creating an environment of collaboration among all stakeholders, including researchers, environmental health and safety coordinators, students, and staff.
  - Identifying health, safety, and environmental issues and resolving them in a time efficient manner.

The College's Environmental Health and Safety staff working closely with oversight committees, has developed programs and standards of practice designed to further the above goals. **Department heads, directors, unit leaders, lab managers, and other supervisors are responsible for implementing this commitment of responsibility.**

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# Employee Training

Training is an essential part of every environmental health and safety management program for protecting workers. It is the responsibility of the department supervisor to ensure training is provided to their assigned employees based on the hazards associated with their jobs.

**Manager's Environmental Health and Safety Training Needs Assessment** assists you in determining an employee's training needs based on the hazards associated with their assigned job duties.  
[https://www.ksre.k-state.edu/agsafe/training/Manager%20EHS%20Training\\_Needs%20Assessment\\_Fillable%20Form\\_01.21.17backup.pdf](https://www.ksre.k-state.edu/agsafe/training/Manager%20EHS%20Training_Needs%20Assessment_Fillable%20Form_01.21.17backup.pdf).

## Training Providers

- » **VIVID Online Learning System** offers over 100 environmental health and safety training courses. In addition, VIVID provides a Training Needs Assessment driven by a series of questions. Based on your answers you will receive a printout of the OSHA-required courses and their training frequency such as new hire, annual, periodic, or when there is a change in job assignment or task performed. Contact your Departmental Safety Coordinator or the College of Agriculture Environmental Health and Safety office for enrollment assistance with the VIVID system.  
<https://vividlearningsystems.com/training-needs-assessment>
- » **CITI Online Learning** offers numerous courses such as Animal Handling, Worker Protection Standard, and Skid Loader training.  
[https://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions\\_06.21.16.pdf](https://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions_06.21.16.pdf)
- » **COA Environmental Health and Safety Office** offers live training and a wide variety of online training courses. Contact the College of Agriculture Environmental Health and Safety office if you need assistance . <http://www.ksre.k-state.edu/agsafe/training/index.html>
- » **K-State Environmental Health and Safety** offers live and online training courses.  
<https://www.k-state.edu/safety/training/>
- » **Departmental Orientation** must be conducted with all existing and new hire employees, and documentation kept on file in the department. New Hire Orientation Checklist:  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html).
- » **Training Course Frequency Requirements**  
<https://www.ksre.k-state.edu/agsafe/training/index.html>
- » *Supervisor Safety Training: Guide to Managing Health, Safety and Environmental Risks.*  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2715.pdf>



Scott Maxwell, Garden City

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Accident Reporting

Accident reporting is an EH&S critical program component. All incidents should be reported immediately. Reporting identifies hazards that need to be eliminated which helps prevent future incidents. Plus, the employee can receive the appropriate medical treatment to better their chances of a faster, smoother recovery.



*Kenny Rohleder, Hays*

» **K-State Worker's Compensation Program** covers reporting requirements, authorized medical attention, non-emergency and emergency medical treatment, time off, disability compensation, Family Medical Leave Act, return to work, and fraud and abuse reporting. Refer to Human Capital Services (HCS) for reporting and worker's compensation questions.

<https://www.k-state.edu/policies/ppm/4800/4820.html#workersc>

» **Report Forms**

- **Accident Report (1101-A) (Employee ID and password required.)**

<https://www.k-state.edu/safety/incident.html>

- **WC Mileage Reimbursement Form**

<http://www.kdheks.gov/hcf/ssif/download/SSIFMileageForm.pdf>

- **State Self Insurance Fund: Questions**

<http://www.kdheks.gov/hcf/ssif/>

The College of Agriculture Environmental Health and Safety office investigates all incidents to identify the causes and provides resources to prevent injuries, save lives, promote a positive workplace, and demonstrate a commitment to health and safety management.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Aerial Lifts

The major cause of injury and fatalities involving aerial lifts are falls, electrocution, and collapses or tip-overs. Aerial devices include boom-supported aerial platforms, such as cherry pickers, bucket trucks, aerial ladders, and vertical towers. All employees working with an aerial lift must be trained operators.

Operators must complete the following:

» **Review OSHA CFR 1926.453 Aerial Lifts.**

*<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.453>*

» **Review the Aerial Lift Standard of Practice.**

*[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Aerial%20Lift%20Operations\\_10.01.16\\_Final.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Aerial%20Lift%20Operations_10.01.16_Final.pdf)*

» **Complete the VIVID Online Aerial and Scissor Lift Safety.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Complete the Aerial Lift Operator Performance Audit.**

*[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)*

» **Additional Resources:**

• **OSHA Aerial Lifts**

*<https://www.osha.gov/SLTC/etools/scaffolding/aeriallifts/index.html>*



Aerial Boom Lift

Aerial lift inspection forms and performance audits should be kept on file with the departmental manager/supervisor. All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Agriculture Safety

Agricultural workers are at a very high risk for fatal and nonfatal injuries including lung diseases, noise-induced hearing loss, skin diseases, bodily crushing, and amputations. In addition, certain cancers are associated with chemical use and prolonged sun exposure. Employees working in agriculture must be trained to recognize the hazards and eliminate or control the hazards.



Wayne Aschwege, Hays

- » **Review 29 CFR 1928 Agriculture Standards.**  
*<https://www.osha.gov/laws-regs/regulations/standardnumber/1928>*
- » **Review 29 CFR 1910.272 Grain Industry.**  
*<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.272>*
- » **Review OSHA Agriculture Operations, Hazards, and Controls.**  
*[https://www.osha.gov/dsg/topics/agriculturaloperations/hazards\\_controls.html](https://www.osha.gov/dsg/topics/agriculturaloperations/hazards_controls.html)*
- » **Complete the Agriculture Safety Quiz.** (Employee ID and password required.)  
*[https://kstate.qualtrics.com/jfe/form/SV\\_eXyW3NLDnLu6x13](https://kstate.qualtrics.com/jfe/form/SV_eXyW3NLDnLu6x13)*
- » **Additional Resource:**
  - **Agricultural Operations.**  
*<https://www.osha.gov/dsg/topics/agriculturaloperations/publications.html>*

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

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# Animal (Farm) Handling Safety

Employees must have an understanding of animal behavior to avoid and control dangerous situations. Learning an animal's predictable behavior can prevent harm to the individual or animal.



Marissa Johnson, Manhattan

- » **Review National Agriculture Safety Database: Animal Handling Safety**  
<http://nasdonline.org/44/d001612/handling-farm-animals-safely.html>
- » **Review the University of Minnesota Extension Service: Safety with Animals**  
<http://nasdonline.org/1621/d001502/safety-with-animals.html>
- » **Complete the Animal (Farm) Handling Safety Quiz.** (Employee ID and password required.)  
[https://kstate.qualtrics.com/jfe/form/SV\\_82eLLW0pH7w6esOp](https://kstate.qualtrics.com/jfe/form/SV_82eLLW0pH7w6esOp)
- » **Animal Handling Video Resources:**
  - K-State University Compliance Office (IACUC)  
<https://www.k-state.edu/comply/index.html>
  - Sheep Handling; Work Smarter, Not Harder  
<https://www.youtube.com/watch?v=V8jt4TLAwwU>
  - Goat Handling: Worker Smarter, Not Harder  
[https://www.youtube.com/results?search\\_query=safe+handling+of+goats](https://www.youtube.com/results?search_query=safe+handling+of+goats)
  - Livestock Handling: Safety on the Farm (National Farmers Union)  
<https://www.youtube.com/watch?v=xh2-uwIWARA>
  - Dairy Cow Handling:  
<http://csu-cvms.colostate.edu/academics/erhs/agricultural-health-and-safety/Pages/dairy-videos.aspx>
  - Swine Safe Handling:  
<https://www.youtube.com/watch?v=zvDTCNGNRCY>
  - Horse Safe Handling: Basics  
<https://www.youtube.com/watch?v=XJif22DLGII>

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[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Asbestos/Lead Safety

All building components shall be inspected for asbestos and lead-based paint prior to any alterations. This includes all renovations or demolitions of any institutional, commercial, public, industrial, residential, or farm structure owned by Kansas State University and affiliates. Employees working on projects that contain asbestos/lead building materials shall be asbestos certified through the K-State EHS department. In addition, K-State building occupants should have an asbestos/lead awareness training.



Shane Garrett, K-State Asbestos/Lead Inspector

- » Review OSHA 29 CFR 1910.1001 Asbestos Standard.  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1001>
- » Complete the VIVID Online Asbestos and Lead Hazard Awareness course (non-asbestos workers).
  - Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.

Or

- » Complete the K-State Asbestos/Lead Awareness for Building Occupants (Course Code: WTD166)
  - Contact Learning and Development at [learning-develop-hr@k-state.edu](mailto:learning-develop-hr@k-state.edu).
- » Review K-State Environmental Health and Safety Procedure for Handling Asbestos/Lead.  
<https://www.k-state.edu/safety/occupational/asbestos-lead/asbestos-handling.html>
- » Additional Resources:
  - OSHA Asbestos Overview/Fact Sheet  
<https://www.osha.gov/SLTC/asbestos/index.html>  
<https://www.osha.gov/Publications/OSHA3507.pdf>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Bloodborne Pathogens Safety

Employees who during their course of employment may come into contact with human blood or potentially infectious body fluids must be trained before the assignment of a task where occupational exposure may take place and annually thereafter.



- » **Review the Bloodborne Pathogen Standard of Practice.**  
*[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)*
- » **Review OSHA Bloodborne Pathogen Standard 29 CFR 1910.1030.**  
*[https://www.osha.gov/pls/osha/web/owadisp.show\\_document?p\\_id=10051&p\\_table=STANDARDS](https://www.osha.gov/pls/osha/web/owadisp.show_document?p_id=10051&p_table=STANDARDS)*
- » **Complete the VIVID Online Bloodborne Pathogen Training.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Review the Occupational Medical Program.**  
*[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)*
- » **Review Animal Needlestick Prevention. Producers and Vets (if applicable).**  
*<http://umash.umn.edu/wp-content/uploads/2015/12/Needlestick-Prod-Vet-FactSheet.pdf>*

All department-specific training must be kept on file with the supervisor.

**Back to Contents**



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# Combustible Dust Safety

Employees exposed to combustible dust such as candy, sugar, spice, starch, flour and feed, grain, wood, pesticides, pharmaceuticals, and metals are in danger because the finely divided material form can become explosive under certain conditions, causing severe injuries or death. Employees need to be trained to recognize and control dust hazards.



O.H. Kruse Feed Mill, Kansas State University, Manhattan

- » **Review the OSHA Combustible Dust: An Explosion Hazard.**  
<https://www.osha.gov/dsg/combustibledust/guidance.html>
- » **Complete the VIVID Online Introduction to Combustible Dust Hazards.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Complete the Grainnet Dust Control in the Grain Industry; Problems and Solutions Archived Webinar Feb. 14th, 2017.**  
<http://www.grainnet.com/webinars-archived>
- » **OSHA Hazard Alert: Combustible Dust Explosions.**  
<https://www.osha.gov/Publications/osa3791.pdf>
- » **Additional Resources:**
  - **Combustible Dust: Does your company or firm process any of these products or materials in a powdered form?**  
<https://www.osha.gov/Publications/combustibledustposter.pdf>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Compressed Gases/Air Safety



Bruce Ramundo, Manhattan

Compressed gas cylinders are associated with a number of different hazards such as potentially explosive conditions, cryogenic temperatures, and contain gases that are flammable, oxidizing, toxic, corrosive, and reactive. Employees using compressed gases must be trained to recognize and control these hazards.

» **Complete the VIVID Online Training for Compressed Gases.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Perform departmental evaluations using the Compressed Gas Self-Inspection Checklist.**

*<https://www.cdc.gov/niosh/docs/2004-101/chklists/r1n29c-1.htm>*

» **Additional Resources:**

- **OSHA 29 CFR 1910., 1915, 1917 and 1926 Compressed Gas.**  
*<https://www.osha.gov/SLTC/compressedgasequipment/standards.html>*
- **OSHA 29 CFR 1910.169 Air Receivers: Compressed Gas/Air.**  
*<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.169>*
- **K-State Pressure Vessels (Lab Safety Manual).**  
*<https://www.k-state.edu/safety/lab/labsafety/topics/specifichazards/pressureVessels.html>*

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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# Confined Spaces Safety

A confined space has limited openings for entry or exit, is large enough for entering and working, and is not designed for continuous human occupancy. Examples of confined spaces in agriculture are vaults, tanks, grain storage bins, manholes, boot, receiving and manure pits, silos, pipelines, and sewers, each representing various hazards.



Chance Fiehler, Manhattan

- » **Review OSHA 29 CFR 1910.146 Permit-Required Confined Spaces.**  
[https://www.osha.gov/pls/osha/web/owadisp.show\\_document?p\\_id=9797&p\\_table=STANDARDS](https://www.osha.gov/pls/osha/web/owadisp.show_document?p_id=9797&p_table=STANDARDS)
- » **Review Confined Space Standard Operating Procedure.**  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Confined%20Space\\_10.02.15.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Confined%20Space_10.02.15.pdf)
- » **Complete the VIVID Confined Space Entry-Permit Required training.** Training must be completed by any employee entering into a permit-required confined space. Employees entering non-permit spaces must complete the VIVID Confined Space Training.
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Review Confined Space on a Farm:**  
<https://www.osha.gov/Publications/OSHA3939.pdf>
- » **Review Confined Space Manure Storage Hazards** (if applicable).  
<https://extension.psu.edu/confined-space-manure-storage-hazards>

Issued confined space permits need to be kept on file for a period of one year.

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Electrical Safety (LO/TO)/Generators

All employees must be able to identify and control electrical hazards associated with their assigned work environment. Fatal and nonfatal injuries can occur if exposed to energized electrical lines, damaged tools and equipment, inadequate wiring, overloaded circuits, exposed electrical parts, improper grounding, damaged insulation, and operating electrical equipment in wet areas. Employees should not be working in electrical panels with the covers off, exposing live electrical components, unless they are trained in accordance with the NFPA 70E guidelines and implement NFPA E safe work practices.



*Kolten Harshbarger, Manhattan*

## **Employees Performing Electrical Work or Equipment Maintenance**

- » Review the COA Electrical Lockout and Tagout Standard Operating Procedure.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/LOTO\\_08.17.15.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/LOTO_08.17.15.pdf)
- » Complete the VIVID Electrical Safety online learning course.
- » Complete the VIVID Lockout and Tagout online learning course.
- » Review the Fluke Safety for electrical measurements:  
<https://www.fluke.com/en-us/learn/online-courses/digital-multimeter-basics-online-course>
- » PERFORMANCE AUDIT:  
<https://www.cdc.gov/nora/councils/manuf/loto/pdfs/LOTO-Periodic-Inspection-Template.pdf>

## **Employees NOT Performing Electrical Work or Equipment Maintenance**

- » Complete the VIVID Electrical Safety (OVERVIEW) online learning course.
- » Complete the VIVID Lockout and Tagout (OVERVIEW) online learning course.
  - Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.

## **Employees Using Generators**

- » Review Using Portable Generators Safely to include Grounding requirements.  
[https://www.osha.gov/OshDoc/data\\_Hurricane\\_Facts/portable\\_generator\\_safety.html](https://www.osha.gov/OshDoc/data_Hurricane_Facts/portable_generator_safety.html) and  
[https://www.osha.gov/OshDoc/data\\_Hurricane\\_Facts/grounding\\_port\\_generator.html](https://www.osha.gov/OshDoc/data_Hurricane_Facts/grounding_port_generator.html)

All department-specific training must be kept on file with the supervisor.

**Back to Contents**



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# Emergency Planning and Response

An emergency action plan is critical to departmental operations to prevent disorganization, confusion, injury, and property damage. Each department is required to have a plan specific to their assigned area to include emergency contact numbers. All employees must be trained in how to respond in an emergency situation.



*Michael Bear, Emergency Coordinator*

- » **Review the COA Emergency Action Manual. In addition, specific departmental plans must be reviewed by employees.**  
*[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/EmergencyActionManual.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/EmergencyActionManual.pdf)*
- » **Complete the VIVID online Emergency Response and Fire Preparedness.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

## **Departmental Tools:**

- » **Department Emergency Guide Template** can be used to customize your emergency response plan. To access click on the link below and under the last bullet with the title Planning Resources.  
*<http://www.k-state.edu/police/emergency/>*
- » **K-State Emergency Plan and Guide** for the university provides general guidelines on how to handle various types of threats.  
*<http://www.k-state.edu/police/emergency/>*
- » **K-State Emergency Management Plan** provides the framework for managing the immediate actions and operations to respond to an emergency or a disaster on the Manhattan campus.

Departmental emergency plans should be sent to the College of Agriculture Environmental Health and Safety office to be uploaded to the Environmental Health and Safety secured intranet site for easy referral.

**All department-specific training must be kept on file with the supervisor.**

**[Back to Contents](#)**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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# Emergency Showers/Eye Wash

Employees who are exposed to corrosive material must be provided with suitable facilities for quick drenching or flushing of the eyes and body immediately after exposure. Employees must be trained on the location and how to properly use and maintain the equipment.



Kyle Griffith, Manhattan

- » **Review COA Emergency Shower/Eyewash Installation, Use, Testing, and Maintenance Standard Operating Procedure.**

[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Emergency%20Shower%20Eyewash\\_08.14.15.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Emergency%20Shower%20Eyewash_08.14.15.pdf)

- » **Complete the VIVID Online Emergency Eyewash and Shower course.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

- » **Review Emergency Shower and Eyewash Station Testing Video.**

<https://www.youtube.com/watch?v=8vpSYktSMDC>

- » **Additional Resources:**

- **ANSI Eyewash Compliance Guide.**

<https://www.eyewashdirect.com/ansi-eyewash-z358-eyewash-standard-guide/>

- **Emergency Shower and Eyewash Station Requirements (Quick Tip #120).**

<https://www.grainger.com/content/qt-emergency-shower-eye-wash-stn-req-120>

- **Important Note: Emergency showers (only) on main campus are tested by the College of Agriculture Environmental Health and Safety department.**

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

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# Ergonomics

Employees performing tasks that require heavy lifting, bending, reaching overhead, pushing and pulling heavy loads, working in awkward body postures, and performing the same or similar tasks repetitively are exposed to musculoskeletal disorders (MSDs). Employees must be trained on how to prevent injuries.



Lynn Harshbarger, Garden City

» **Review OSHA Ergonomics/Safety and Health Topic.**

*<https://www.osha.gov/SLTC/ergonomics/identifyprobs.html>*

» **Select applicable courses through the VIVID: Back Safety, Industrial Ergonomics, or Office Ergonomics options.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Additional Resources:**

• **View the COA Biomechanics and Proper Material Handling Video.**

*<https://www.youtube.com/watch?v=F8gYLK6m4c>*

• **Laboratory Safety Ergonomics for the Prevention of Musculoskeletal Disorders/OSHA.**

*<https://www.osha.gov/Publications/laboratory/OSHAfactsheet-laboratory-safety-ergonomics.pdf>*

• **Simple Solutions: Ergonomics for Farm Workers/CDC.**

*<https://www.cdc.gov/niosh/docs/2001-111/pdfs/2001-111.pdf>*

• **Back Injury Prevention Guide with Quizzes (MF2762).**

*<https://www.bookstore.ksre.ksu.edu/pubs/MF2762.pdf>*

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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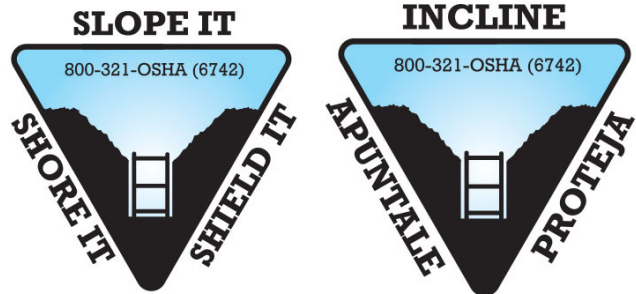
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# Excavation Safety

Employees working in excavation areas are exposed to potential cave-ins, falls, falling loads, hazardous atmospheres, and incidents involving mobile equipment. Employees must be trained before working in or near trenching or excavation areas.



- » **Review Excavation Standard 29 CFR 1926.651.**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.651>
- » **Complete the VIVID online Excavation, Trenching, and Shoring course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Complete Excavation Competent Person 8-hour live training course.**
  - *Contact the COA EH&S Office for enrollment information.*
- » **Utilize the Excavation and Trenching Checklist.**  
<https://www.osha.gov/SLTC/etools/construction/trenching/excavchec.html>
- » **Additional Resources:**
  - **OSHA Trenching and Excavation Safety Guide.**  
<https://www.osha.gov/Publications/osha2226.pdf>
  - **OSHA Trenching and Excavation Safety OSHA Fact Sheet.**  
[https://www.osha.gov/Publications/trench\\_excavation\\_fs.html](https://www.osha.gov/Publications/trench_excavation_fs.html)
  - **DIG Safe /Kansas One-Call (811) Before You Dig.**  
<https://www.kansasonecall.com/>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)



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# Fall Protection (Personal Arrest System)

Employees working from overhead platforms, elevated work stations, and holes in floors or walls must be prevented from falls. Employees must be trained and provided the necessary fall protection equipment to prevent injuries from falls.



Charlie Clark, Topeka

- » **Review the OSHA Fall Protection Standards 29 CFR 1910.23, .25, .26, .27, .66, .67, .68, .132, .140, and Construction 1926.**  
<https://www.osha.gov/SLTC/fallprotection/standards.html>  
<https://www.osha.gov/SLTC/fallprotection/construction.html>
- » **Complete the VIVID online Personal Fall Arrest Systems course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Complete Fall Protection User Competent Person 8-hour live training course.**
  - *Contact the COA EH&S Office for enrollment information.*
- » **Utilize the Fall Equipment Inspection Checklist prior to use and at least annually by a competent inspector.**  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/Fall%20Protection%20Inspections.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/Fall%20Protection%20Inspections.pdf)
- » **Additional Resources :**
  - **Fall Protection Guide with quizzes course (MF2761).**  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2761.pdf>
  - **Fall Prevention Fact Sheet.**  
<https://www.osha.gov/stopfalls/factsheet.pdf>

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[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Farm Equipment Safety

Employees operating farm equipment are exposed to numerous life-threatening and debilitating injuries. Employees must be trained in accordance to each piece of equipment's manufacturer's operations manual. Employee equipment operation performance should be monitored by supervisors to ensure compliance.



Dave Bowen, Garden City

- » **Review 29 CFR 1928 Agriculture Standards.**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1928>
- » **Review Farm Machinery and Equipment — Agriculture Safety Rules.**  
[https://agsci.oregonstate.edu/sites/agsci.oregonstate.edu/files/main/FST\\_manual/04-01.pdf](https://agsci.oregonstate.edu/sites/agsci.oregonstate.edu/files/main/FST_manual/04-01.pdf)
- » **Review Safe Operation of Agriculture Equipment.**  
<https://www.bookstore.ksre.ksu.edu/pubs/S67A.pdf>
- » **Safety on the Farm: Power Take Off (PTO). National Farmers Union.**  
<https://www.youtube.com/watch?v=4o2wiyigMyk>
- » **Complete the Farm Equipment Safety Quiz.** (Employee ID and password required.)  
[https://kstate.qualtrics.com/jfe/form/SV\\_2ryushGFqx9lqUl](https://kstate.qualtrics.com/jfe/form/SV_2ryushGFqx9lqUl)
- » **Complete the below training courses based on employee's assigned tasks.** (Employee ID and password required for Qualtrics quizzes.)
  - **Chipper/Shredder Safety with quizzes (MF2710).** <https://www.bookstore.ksre.ksu.edu/pubs/MF2710.pdf>  
**Quiz:** [https://kstate.qualtrics.com/jfe/form/SV\\_bd4ocqjFfFtEjVb](https://kstate.qualtrics.com/jfe/form/SV_bd4ocqjFfFtEjVb)
  - **Mowing and Trimming Safety with quizzes (MF2714).**  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2714.pdf>  
**Quiz:** [https://kstate.qualtrics.com/jfe/form/SV\\_6RMAYop49yPrKYZ](https://kstate.qualtrics.com/jfe/form/SV_6RMAYop49yPrKYZ)
  - **Tree Trimming Safety with quizzes (MF2712).** <https://www.bookstore.ksre.ksu.edu/pubs/MF2712.pdf>  
**Quiz:** [https://kstate.qualtrics.com/jfe/form/SV\\_3PD7YRhiV5WuZ2l](https://kstate.qualtrics.com/jfe/form/SV_3PD7YRhiV5WuZ2l)
  - **Transporting Farm Equipment.** <https://ppp.purdue.edu/wp-content/uploads/2016/08/PPP-83-reduced.pdf>
  - **Keep the Trailer Connected to the Truck.** <https://www.extension.purdue.edu/extmedia/ppp/ppp-92.pdf>;  
**Quiz:** [https://kstate.qualtrics.com/jfe/form/SV\\_9BIb7NpWIUzIpyB](https://kstate.qualtrics.com/jfe/form/SV_9BIb7NpWIUzIpyB)
  - **Chain Saws — Safety, Operations, Tree Felling Techniques (MF2103).**  
<https://www.bookstore.ksre.ksu.edu/pubs/mf2103.pdf>  
**Complete chain saw safety quiz.** [https://kstate.qualtrics.com/jfe/form/SV\\_d9YVVKJeI6ZfEQ5](https://kstate.qualtrics.com/jfe/form/SV_d9YVVKJeI6ZfEQ5)

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Field Research and Sanitation

Agriculture employees who perform field operations must be provided with potable drinking water and sanitation facilities.

» **Review 29 CFR 1928.110, Field Sanitation.**

<https://www.osha.gov/laws-regs/regulations/standardnumber/1928/1928.110>

» **Complete the Field Sanitation Quiz.** (Employee ID and password required.)

[https://kstate.qualtrics.com/jfe/form/SV\\_1TtH6CWY96KkqvH](https://kstate.qualtrics.com/jfe/form/SV_1TtH6CWY96KkqvH)

» **Complete the VIVID Field Research Course.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Additional Resources**

• **Safety Guidelines for Field Researchers.**

<https://ib.berkeley.edu/courses/bio1b/field/pdf/SafetyGuidelinesforFieldResearchers.pdf>

• **Fact Sheet #51 Field Sanitation Standards.**

<https://www.dol.gov/whd/regs/compliance/whdfs51.pdf>

• **Water and Sanitary Facilities in the Field.**

<http://nasdonline.org/931/d000773/water-and-sanitary-facilities-in-the-field.html>



Mark Golembosky, Colby

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

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# Fire Safety (Fire Extinguisher)

Employees need to be trained regarding the fire hazards associated with their work environment and what to do in the event of a fire emergency. If employees are expected to respond in an emergency they need to know how to appropriately use the equipment.

- » **Review the K-State Fire Plan.** It includes fire and life safety policy, inspections, life safety codes, fire extinguishers, hot work permits, fire watch, equipment impairments, and other topics.

*<http://www.k-state.edu/safety/fire/>*

- » **Complete the VIVID Fire Extinguisher Training and Emergency Response and Fire Preparedness.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

- » **Complete Hands-on Fire Extinguisher Training** offered by either the College of Agriculture Environmental Health and Safety Office or the K-State Fire Safety Department.

- *Online training is required prior to hands-on class. Contact KSU Learning and Development at [learning-develop-hr@k-state.edu](mailto:learning-develop-hr@k-state.edu).*

## Additional Resource:

- **OSHA Fire Safety Fact Sheet**

*[https://www.osha.gov/OshDoc/data\\_General\\_Facts/FireSafetyN.pdf](https://www.osha.gov/OshDoc/data_General_Facts/FireSafetyN.pdf)*



Andrew Klein, Manhattan

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**[Back to Contents](#)**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# First Aid/CPR

Employees need to have readily available access to medical treatment. In the absence of medical services, a person or persons shall be adequately trained to render first aid and CPR in the event of a medical emergency.



- » **Review the OSHA Medical and First Aid 29 CFR 1910 standards.**

*<https://www.osha.gov/SLTC/medicalfirstaid/standards.html>*

- » **Complete the VIVID First Aid Training.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

*Note: This online training does not meet the certification for CPR. You must contact Lafene Healthcare Center for additional training.*

- » **Review OSHA or K-State First Aid Kit content requirements.**

*<https://www.k-state.edu/safety/occupational/first-aid-kits/>*

*<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.266AppA>*

- » **Additional Resources:**

- **First Aid and CPR Programs are offered by Lafene Health Center and KSU Public Safety.**

*Contact the COA EH&S Office for enrollment assistance for these programs.*

- **OSHA Best Practices Guide: Fundamentals, of Workplace First-Aid Program.**

*<https://www.osha.gov/Publications/OSHA3317first-aid.pdf>*

**All department-specific training must be kept on file with the supervisor.**

**[Back to Contents](#)**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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# Grain Industry Safety

The agriculture industry is dangerous and exposes a worker to a number of different hazards, including moving mechanical equipment/parts, suffocation, electrocution, dust explosions, and engulfment.



Bill Riley, Topeka

- » **Review OSHA 29 CFR 1910.272 Grain Handling Facilities.**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.272>
- » **Review Grain Bin Entry Standard of Practice.** Provides guidelines for employees who are required to perform grain bin entry.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Grain%20Bin%20Entry%20Final.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Grain%20Bin%20Entry%20Final.pdf)
- » **Review Sweep Auger Standard of Practice.** Provides general guidelines employees for employees working inside a grain bin with a sweep auger or conveying equipment.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Sweep%20Auger%20Final.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Sweep%20Auger%20Final.pdf)
- » **Review Harvest Safety.** [https://ehs.unl.edu/sop/s-harvest\\_safety.pdf](https://ehs.unl.edu/sop/s-harvest_safety.pdf)
- » **Complete Grain Industry Safety Quiz.** (Employee ID and password required.)  
[https://kstate.qualtrics.com/jfe/form/SV\\_1EY8CNOwlho5gpf](https://kstate.qualtrics.com/jfe/form/SV_1EY8CNOwlho5gpf)
- » **Additional Resources:**
  - **OSHA Fact Sheet:** <https://www.osha.gov/Publications/grainstorageFACTSHEET.pdf>
  - **Grain Handling Coalition:** <https://www.youtube.com/watch?v=2a50Sb57YN0>
  - **Safety Measures in Handling Stored Grain (AF170):**  
<https://www.bookstore.ksu.edu/pubs/AF170.pdf>
  - **Grain Handling Standard:**  
[http://grainsafetytraining.org/Grain\\_Handling\\_Standard\\_for%20GOEPS\\_Storyline\\_output/story\\_html5.html](http://grainsafetytraining.org/Grain_Handling_Standard_for%20GOEPS_Storyline_output/story_html5.html)
  - **Grain Bin Safety “Protecting Yourself and Your Family:**  
<https://www.youtube.com/watch?v=YDwJcdjlZYE&feature=youtu.be>
  - **Grain Hazards Module 1:**  
[http://grainsafetytraining.org/Hazard\\_ID\\_Module\\_1\\_Storyline\\_output/story\\_html5.html](http://grainsafetytraining.org/Hazard_ID_Module_1_Storyline_output/story_html5.html)
  - **Grain Hazards Module 2:**  
[http://grainsafetytraining.org/Hazard\\_ID\\_Module\\_2\\_Storyline\\_output/story\\_html5.html](http://grainsafetytraining.org/Hazard_ID_Module_2_Storyline_output/story_html5.html)
  - **Grain Hazards Module 3:**  
[http://grainsafetytraining.org/Hazard\\_ID\\_Module\\_3\\_Storyline\\_output/story\\_html5.html](http://grainsafetytraining.org/Hazard_ID_Module_3_Storyline_output/story_html5.html)
  - **Grain Hazards Module 4:**  
[http://grainsafetytraining.org/Hazard\\_ID\\_Module\\_4\\_Storyline\\_output/story\\_html5.html](http://grainsafetytraining.org/Hazard_ID_Module_4_Storyline_output/story_html5.html)

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Hand-Powered Tool Safety

Employees who use hand and power tools are exposed to the hazards of falling, flying, abrasive, and splashing objects, or to harmful dusts, fumes, and mists. Employees must be issued the appropriate personal protective equipment and be trained in the proper use of all tools. Workers should be able to recognize the hazards associated with the different types of tools and the necessary safety precautions.



Marvin Farmer, Colby

- » **Review OSHA 29 CFR 1910.241-1910.244 Hand Powered Tools.**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.241>
- » **Complete VIVID Hand Powered Tool and Hand Safety courses.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Perform routine departmental hand tool inspections to identify and replace defective tools.**  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)
- » **Additional Resources:**
  - **OSHA Hand Powered Tool Guide.**  
<https://www.osha.gov/Publications/osha3080.pdf>
  - **OSHA Abrasive Wheel Checklist.**  
<https://www.osha.gov/SLTC/machineguarding/new-grinder-checklist.html>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

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# Hazard Assessments (Safety Audits)

Conducting regular inspections for all operations, equipment, work areas, and facilities is a critical component in reducing the employee's exposure to hazards.



Joe Becker, Hays

» **Complete VIVID Safety Audit course.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Conduct Laboratory Inspections.** Inspections should be conducted on a routine basis using the laboratory inspection form.

[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)

» **Conduct agriculture inspections for all other areas.** Inspections should be conducted routinely, using the farm inspection form.

[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)

» **Additional Resource:**

- **OSHA Self-Inspection Checklist** can be used as a comprehensive inspection tool that is safety-category specific such as portable, ladders, welding, elevated surfaces, etc.

[https://www.rit.edu/~w-outrea/OSHA/documents/Module2/M2\\_SelfChcklst.pdf](https://www.rit.edu/~w-outrea/OSHA/documents/Module2/M2_SelfChcklst.pdf)

- **Risk Assessment Tool:** User's Guide provides a means to assess, prioritize, and mitigate hazards in the work environment.

[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/Risk%20Assessment%20Template\\_01.23.18.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/Risk%20Assessment%20Template_01.23.18.pdf)

- **Job Safety Analysis Tool:** is a procedure that helps identify job task potential hazards and determines control measures.

**Fact Sheet:** [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/JSA%20Fact%20Sheet\\_08.20.15.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/JSA%20Fact%20Sheet_08.20.15.pdf)

**Form:** [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/JSA%20Task%20Analysis%20Form\\_08.20.15.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/JSA%20Task%20Analysis%20Form_08.20.15.pdf)

It is important that documentation of inspections be kept on file. The inspection form is a great training tool to educate staff to identify hazards in their areas and how to eliminate and control those hazards.

**All department-specific training must be kept on file with the supervisor.**

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Hazard Communication (Chemical Safety)

Hazardous materials are important elements in the workplace, they range from cleaning fluids to pharmaceuticals, pesticides, and paints. Some chemicals have the potential to cause adverse effects, including health and physical hazards. The HazCom program is designed to protect workers from these effects.



Hai Xia, Manhattan

- » **Review the Hazard Communication Standard of Practice.**  
Provides employees with the necessary information to protect their health and well-being from chemical hazards.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/HazCom2012\\_03.27.18.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/HazCom2012_03.27.18.pdf)
- » **The VIVID Hazardous Communication training must be completed by employees using hazardous chemicals.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Review the Chemical and Hazardous Material Management program.** Assists in chemical management, providing a centralized chemical inventory. In addition, VIVID offers high hazard training for Flammables, Benzene, Hexavalent Chromium, Formaldehyde, Hydrogen Sulfide, Chlorine, and Silica. <https://www.k-state.edu/safety/lab/chemical/>
- » **Additional Resources:**
  - **Working Safely Around Hazardous Substances (MF2760).**  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2760.pdf>
  - **OSHA Steps to an Effective Hazard Communication Program**  
<https://www.osha.gov/Publications/OSHA3696.pdf>
  - **Hazard Communication Standard: Labels and Pictograms**  
<https://www.osha.gov/Publications/OSHA3636.pdf>
  - **OSHA Hazardous Communication Standard: Safety Data Sheets**  
<https://www.osha.gov/Publications/OSHA3514.pdf>
  - **OSHA 1910.1000 Table Z-2 Toxic and Hazardous Substances:**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1000TABLEZ2>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Hazardous Waste Safety

Hazardous waste management helps to protect human health and the environment. The Environmental Protection Agency has the cradle-to-grave system. K-State's Environmental Health and Safety department provides waste management services.



Kelly Greene, K-State Hazardous Waste Manager

- » **Review Hazardous Waste Pick-up** webpage, which contains the Request a Pick-up Form, Categories of Hazardous Waste, and Proper Labeling Requirements.  
<https://www.k-state.edu/safety/environmental/hazardous-waste/>
- » **On Campus: Complete KSU Hazardous Waste Awareness Training** (Course Number WTDO80), which must be completed by employees generating hazardous waste.
  - **Schedule:** <https://www.k-state.edu/safety/training/hazardous-waste/index.html>
- » **Off Campus: Review the Hazardous Waste Awareness Training (online PowerPoint). No testing is required.**  
<https://www.k-state.edu/safety/docs/HW-Awareness-training-10-Dec-2018.pdf>
- » **Spills:** Small spills: Personnel can clean up small spills if they have the appropriate personal protective equipment and have been trained. Notify EHS at 532- 5856.  
Large, dangerous, or toxic spill: Evacuate area and call 911.
- » **Additional Resources:**
  - **Laboratory Clean-out:** <https://www.k-state.edu/safety/environmental/labcleanout/>
  - **Medical Waste:** <https://www.k-state.edu/safety/environmental/medical-waste/>
  - **Controlled Substances:** <https://www.k-state.edu/safety/environmental/controlled-substance/>
  - **Recycling:** <http://www.k-state.edu/recycling/>
  - **Air Contaminants OSHA Table Z-1:**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1000TABLEZ1>

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[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Hearing Conservation

Employees working in the agriculture industry are exposed to high noise levels that can cause temporary or permanent hearing loss. Noise-induced hearing loss can be prevented by incorporating the hearing conservation program elements.



Jared Petz, Hutchinson

- » **Review the KSU Hearing Conservation Program.**  
<https://www.k-state.edu/safety/occupational/hearing-conservation/>
- » **Complete VIVID Hearing Conservation course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Schedule and Complete Hearing Screening Evaluation/Medical Surveillance.** Contact your environmental health and safety coordinator.  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)
- » **Additional Resources:**
  - **Hearing Conservation Guide.**  
<https://www.osha.gov/Publications/osa3074.pdf>
  - **Farming is Noisy Business — Don't Let it Steal Your Hearing.**  
<http://nwdistrict.ifas.ufl.edu/phag/2018/01/26/farming-is-noisy-business-dont-let-it-steal-your-hearing/>
  - **Hearing Conservation for the Agriculture Community (MF2875).**  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2875.pdf>

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Heat/Cold Stress

Employees working in agriculture are exposed to extreme weather conditions — from extreme heat to extreme cold. Employees need to be trained how to prevent adverse exposure and be able to recognize symptoms.



Amanda Burnett, Tribune

- » **Review OSHA Cold Stress Card.**  
<https://www.osha.gov/Publications/OSHA3156.pdf>
- » **Review OSHA Heat Illness: Protecting Workers from the Effects of Heat Fact Sheet.**  
[https://www.osha.gov/OshDoc/data\\_Hurricane\\_Facts/heat\\_stress.pdf](https://www.osha.gov/OshDoc/data_Hurricane_Facts/heat_stress.pdf)
- » **Complete VIVID Cold Stress and Heat Stress courses.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Utilize the Heat Safety Tool (Voluntary)**, a mobile phone app that measures heat index and risk level. [https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html)
- » **Additional Resources:**
  - **Climate Change and Worker Health.**  
<http://climatehealthconnect.org/wp-content/uploads/2016/09/Workers.pdf>

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

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# Heavy Equipment Safety

Employees operating heavy equipment are exposed to many different hazards such as rollovers, being crushed in equipment, and running over others. Employees must be qualified as operators by training and experience operating the equipment.



- » **Review 29 CFR 1926.600 Equipment and 1926.602 Material Handling.**  
**1926.600:** <https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.600>  
**1926.602:** <https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.602>
- » **Review the COA Bulldozer Operation Standard of Practice (if applicable).**  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)
- » **Complete the required Operator Certification Course based on type of equipment being operated provided by 360training.com. There is an associated cost for the online certification which must be approved by the Department Head.**  
<https://www.360training.com>
- » **Review OSHA “Operation Specifics” Heavy Equipment.**  
<https://www.osha.gov/SLTC/etools/hurricane/heavy-equip.html>
- » **Perform Heavy Equipment Pre-Use/Daily Inspections using the provided inspection forms based on the type of heavy equipment being used. Use the equipment manufacturer inspection form, if available.**  
[https://www.cat.com/en\\_US/support/safetyservices/resources/checklists/safety-inspection.html](https://www.cat.com/en_US/support/safetyservices/resources/checklists/safety-inspection.html)

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

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# Hoist/Sling Safety

## (Material Handling)

Employees using lift equipment are exposed to hazards when performing material lift operations. Operators of lift equipment must be trained on proper equipment use in accordance to the manufacturer's operational instructions, how to conduct inspections, lockout and tagout procedures, and who to contact for repairs of defective equipment.



Garrett Glanzer, Manhattan

- » **Review 29 CFR 1910.179-1910.181 Material Handling and Storage.**  
*<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.179>*
- » **Review 29 CFR 1910.184 Slings.**  
*[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_id=9834&p\\_table=STANDARDS](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9834&p_table=STANDARDS)*
- » **Complete VIVID Online Training: Overhead and Gantry Crane Safety and Introduction to Safe Material Storage.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Complete monthly crane/hoist inspections using the provided checklist.**  
*[https://ehs.psu.edu/sites/ehs/files/appendix\\_b\\_-\\_crane\\_and\\_hoist\\_monthly\\_inspection\\_checklist.docx](https://ehs.psu.edu/sites/ehs/files/appendix_b_-_crane_and_hoist_monthly_inspection_checklist.docx)*
- » **Additional Resources:**
  - **Cranes and Derricks in Construction-Small Entity Compliance Guide for the Final Rule.**  
*<https://www.osha.gov/Publications/OSHA3433.pdf>*
  - **Crane, Hoist, Sling Safety Program.**  
*<https://protect.iu.edu/environmental-health/occupational-safety/equipment/crane-hoist-sling.html>*

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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# Hot Work/Welding Safety

Employees performing hot work/welding tasks are exposed to many hazards such as exposure to metal fumes, ultraviolet light, burns, electrical shock, and cuts. Employees must be trained to identify and control these hazards.



Mark Leuthold, Manhattan

» **Review OSHA 29 CFR 1910.251-1910,255 Welding, Cutting, and Brazing Standards**

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.251>

» **Complete VIVID Hot Work with Arc Welding course.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Complete KSU Hot Work Permit (if applicable).**

<https://www.k-state.edu/safety/fire/hot-work/>

» **Additional Resources:**

- **KSRE Agriculture Engineering Safety Lesson Plan: Arc, TIP, and MIG Welding Safety.**  
<http://nasdonline.org/952/d000793/agricultural-engineering-safety-lesson-plan-arc-tig-and.html>

- **KSRE Agriculture Engineering Safety Lesson Plan: Oxyacetylene Welding.**  
<http://nasdonline.org/944/d000785/agricultural-engineering-safety-lesson-plan-oxyacetylene-welding-safety.html>

- **Controlling Hazardous Fume and Gases during Welding.**

<http://nasdonline.org/7256/d002482/controlling-hazardous-fume-and-gases-during-welding.html>

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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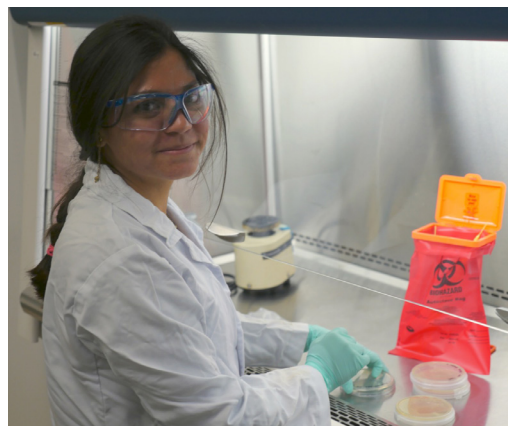


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# Laboratory Safety

Employees working in laboratory environments are exposed to numerous potential hazards, including chemical, biological, physical, and radioactive hazards. Employees must be trained to recognize and control these hazards.



Ellen Mendez, Manhattan

- » **Review the K-State Lab Safety Manual**, which has established safety measures and procedures that you must follow. Includes a chemical hygiene program, biosafety manual, chemical inventory database and exposure control plan. <https://www.k-state.edu/safety/lab/labsafety/>
- » **Complete the VIVID Online Training for Lab Safety 3-part series:** “Analyzing Hazards,” “Developing and Using Controls,” and “Working Safely,” plus, any additional specialty training specific to lab research performed.
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Perform routine laboratory environmental health and safety audits** to identify and correct hazards. [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/KSU%20Ag%20Lab%20Safety%20Inspection%20Checklist\\_10.12.16.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/KSU%20Ag%20Lab%20Safety%20Inspection%20Checklist_10.12.16.pdf)
- » **Post laboratory signs, found at:** <https://www.k-state.edu/safety/lab/labsign/>
- » **Complete a laboratory spill response drill annually using this form:** [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/COA%20Lab%20Spill%20Reponse%20Procedure.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/COA%20Lab%20Spill%20Reponse%20Procedure.pdf).
- » **Additional Resources:**
  - **KSU University Compliance Office (BSL-2 Labs)**  
<https://www.k-state.edu/comply/index.html> and  
<https://www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2009-P.PDF>
  - **OSHA Laboratory Safety Guide.**  
<https://www.osha.gov/Publications/laboratory/OSHA3404laboratory-safety-guidance.pdf>
  - **OSHA Fact Sheet Laboratory Safety Chemical Hygiene Plan (CHP).**  
<https://www.osha.gov/Publications/laboratory/OSHAfactsheet-laboratory-safety-chemical-hygiene-plan.pdf>
  - **KSU Chemical Hygiene Plan.**  
<https://www.k-state.edu/safety/docs/CHP-FINAL.PDF>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Ladder Safety

Employees who fall from heights suffer serious work-related injuries or death. Employees must be protected from fall hazards when working on ladders.

» **Review OSHA 29 CFR 1926.1053 Ladders.**

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1053>

» **Complete VIVID Ladder Safety Training course.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Perform routine documented ladder inspections using the provided checklist.** Keep copies for inspections on file in the department.

[https://www.wernerco.com/docs/default-source/literature/ladder-safety-inspection-form.pdf?sfvrsn=ff6cdffd\\_0](https://www.wernerco.com/docs/default-source/literature/ladder-safety-inspection-form.pdf?sfvrsn=ff6cdffd_0)

» **Additional Resources:**

• **Agriculture: Protecting Workers from Tripod Orchard Ladder Injuries Quick Card.**

<https://www.osha.gov/Publications/OSHA3705.pdf>

• **OSHA Safe Use of Stepladders.**

<https://www.osha.gov/Publications/OSHA3662.pdf>



Trey Spinder, Manhattan

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Machine Guarding

Employees exposed to moving machine parts can suffer from amputations, lacerations, crushing injuries, abrasions, and death. Appropriate machine guarding is a hazard-control method to reduce the threat of injury.



Jeff Overmyer, Topeka

- » **Review 29CFR 1910.212 and 29 CFR 1928.57**, which establishes machine guarding requirements.
  - **29 CFR 1910.212:** <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.212>
  - **29 CFR 1928.57:** <https://www.osha.gov/laws-regs/regulations/standardnumber/1928/1928.57>
- » **Complete the VIVID Online Machine Guarding course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Perform routine departmental machine guarding audits using the OSHA Machine Guarding eTool.** <https://www.osha.gov/SLTC/etools/machineguarding/index.html>
- » **Additional Resource:**
  - **OSHA Machine Guarding Possible Solutions.**  
<https://www.osha.gov/SLTC/machineguarding/solutions.html>

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Motor Vehicle Safety (DOT Regulations)

Motor vehicle accidents are the leading cause of work-related deaths. Employees must be trained on defensive driving techniques to reduce the potential risks associated with being a motor vehicle operator.



Randall Currie, Garden City

» **Complete the VIVID Online Driver Safety Course.**

- *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Complete the K-State Coaching the Van Driver (if applicable).** This course is required for all van drivers of any 8-, 12-, or 15-passenger vans. For the current course schedule, go to the Van Training webpage.

*<http://www.k-state.edu/facilities/operations/training/van-training/index.html>*

» **Additional Resources:**

- **Motor Vehicle Safety for the Landscaping and Horticultural Services Industry (MF2709)**  
*<https://www.bookstore.ksre.ksu.edu/pubs/MF2709.pdf>*
- **Motor Vehicle Guidelines for Employers**  
*[https://www.osha.gov/Publications/motor\\_vehicle\\_guide.pdf](https://www.osha.gov/Publications/motor_vehicle_guide.pdf)*
- **OSHA Motor Vehicle Safety Fact Sheet**  
*[https://www.osha.gov/OshDoc/data\\_Vehiclesafe/vehiclesafefactsheet.pdf](https://www.osha.gov/OshDoc/data_Vehiclesafe/vehiclesafefactsheet.pdf)*
- **OSHA Motor Vehicle Safe Driving Quick Card**  
*<https://www.osha.gov/pls/publications/publication.athruz?pType=Industry&pID=141>*
- **Federal Motor Carrier Safety Administration**  
*<https://www.fmcsa.dot.gov/regulations/title49/b/5/3>*
- **Kansas Department of Transportation**  
*<http://www.ksdot.org>*

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Office Safety

Employees who use a computer are at risk of developing musculoskeletal disorders (MSD). To reduce stress and strain of muscles, tendons, and skeletal system it is important to maintain neutral body postures, avoid prolonged periods of sitting, and reduce repetitive activities.



Milissa Alexander, Hays

- » **Review OSHA Computer Workstations.**  
<https://www.osha.gov/SLTC/computerworkstation/index.html>
- » **Complete the VIVID Online Office Ergonomics course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Review the Office Safety general guidelines.**  
<https://www.chem.tamu.edu/rgroup/wooley/safety/18.pdf>
- » **Review Office Ergonomics Safety Video: Simple Solutions for Comfort and Safety.**  
<https://www.youtube.com/watch?v=ofnpBtO1-gA>
- » **Perform an ergonomic evaluation of your computer workstation using the provided checklist.**  
Professional evaluations are provided by the College of Agriculture Environmental Health and Safety office.  
[https://www.osha.gov/SLTC/etools/computerworkstations/checklist\\_purchasing\\_guide.html](https://www.osha.gov/SLTC/etools/computerworkstations/checklist_purchasing_guide.html)
- » **Additional Resource:**
  - **OSHA Ergonomics.**  
<https://www.osha.gov/SLTC/ergonomics/index.html>

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Personal Protective Equipment

Employees must be trained and are required to wear the appropriate personal protective equipment (PPE) specified for the job task being performed. It is the employer's responsibility to provide PPE at no cost to the employee.



» **Review OSHA 29 CFR 1910.132 Personal Protective Equipment.**

[https://www.osha.gov/pls/osha/web/owadisp.show\\_document?p\\_id=9777&p\\_table=STANDARDS](https://www.osha.gov/pls/osha/web/owadisp.show_document?p_id=9777&p_table=STANDARDS)

» **Complete the VIVID Online Personal Protective Equipment 7-module course.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Review the COA Personal Protective Equipment SOP.**

[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/PPE\\_10.02.15.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/PPE_10.02.15.pdf)

» **Complete the COA PPE Hazard Assessment Form.**

[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/PPE%20Hazard%20Assessment%20Form\\_Editable%20pdf\\_01.05.18.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/PPE%20Hazard%20Assessment%20Form_Editable%20pdf_01.05.18.pdf)

» **Additional Resources:**

• **OSHA Personal Protective Equipment.**

<https://www.osha.gov/SLTC/personalprotectiveequipment/payment.html>

• **OSHA Fact Sheet Personal Protective Equipment.**

[https://www.osha.gov/OshDoc/data\\_General\\_Facts/ppe-factsheet.pdf](https://www.osha.gov/OshDoc/data_General_Facts/ppe-factsheet.pdf)

**All department-specific training and PPE assessments must be kept on file with the supervisor.**

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Powered Industrial Truck Safety (Forklift and Pallet Jack)

Powered industrial trucks are commonly referred to as forklifts or lift trucks. They include skid loaders with vertical mast, tractors with forks, walkie stackers, and stand-behind forklifts. Employees operating any forklift equipment must be trained operators.



Paul Blodgett, Manhattan

- » **Review the COA Powered Industrial Truck/Forklift Standard of Practice**, which serves as an essential element in identifying and managing risk to staff associated with forklift activities.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Powered%20Industrial%20Truck-Forklift\\_12.08.17\\_Final.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Powered%20Industrial%20Truck-Forklift_12.08.17_Final.pdf)
- » **Complete the VIVID Fundamentals of a Forklift Operator and Intro to Pallet Jack Safety (if applicable)**. All forklift operators must take the courses.
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **In addition to the VIVID training, if the operator is using a skid loader with forks, they must take the CITI Skid Loader Training.**  
[http://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions\\_06.21.16.pdf](http://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions_06.21.16.pdf)
- » **Complete the Operator Performance Evaluations** using the audit form in the standard operating procedure (SOP). A Forklift Performance Evaluation video is available to assist operators in the audit process and course set-up.  
<https://www.youtube.com/watch?v=KSZxFSN1ysg>
- » **Review OSHA Bulletin Unauthorized Modification of a Forklift.**  
[https://www.osha.gov/dts/hib/hib\\_data/hib19960620.html](https://www.osha.gov/dts/hib/hib_data/hib19960620.html)
- » **Additional Resources**
  - **Forklift Safety Frequently Asked Questions.**  
<https://www.jjkeller.com/learn/forklift-operator-safety-faqs>
  - **Lift Truck Safety (MF2759):** <https://www.bookstore.ksre.ksu.edu/pubs/MF2759.pdf>

Employees that complete the entire training process will be issued a certificate of completion and an operator wallet card from the College of Agriculture Environmental Health and Safety office. **All department-specific training must be kept on file with the supervisor.**

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Prescribed Burning Safety

Employees who perform prescribed burning are exposed to hazardous, stressful, and strenuous conditions. Improperly managed burns or lack of knowledge of safety measures can result in serious injuries, death, and major property damage. Employees must be trained to recognize and control hazards associated with the duties assigned.



Eric Ward, Manhattan

» **Review KSU Prescribed Burning Safety.**

<https://www.bae.ksu.edu/docs/farm-safety/l565.pdf>

It is also available at: <https://www.bookstore.ksre.ksu.edu/pubs/L565.pdf>

» **Review the USDA Wildland Firefighter Smoke Exposure.**

<https://www.fs.fed.us/t-d/pubs/pdfpubs/pdf13511803/pdf13511803dpi100.pdf>

» **Complete the Prescribed Burning Safety Quiz.** (Employee ID and password required.)

[https://kstate.qualtrics.com/jfe/form/SV\\_9LEIQusc7Jr8hJr](https://kstate.qualtrics.com/jfe/form/SV_9LEIQusc7Jr8hJr)

» **Review KSRE Prescribed Burning Notebook** and attend the Kansas Joint-Agency Prescribed Burn Workshop offered at several locations around the state each fall/winter. For details, contact Jason Hartman at (785) 532-3316 or Walter Fick at (785) 532-7233.

[https://www.butler.k-state.edu/docs/ag/rx\\_burning/bb%20winter.pdf](https://www.butler.k-state.edu/docs/ag/rx_burning/bb%20winter.pdf)

» **Review Wildland Fire Suppression and Prescribed Fire.**

<https://osha.oregon.gov/OSHARules/div7/div7N.pdf>

» **Additional Resources:**

• **USDA Prescribed Burning Fact Sheet.**

[https://efotg.sc.egov.usda.gov/references/public/ND/prescribed\\_burning\\_fact\\_sheet.pdf](https://efotg.sc.egov.usda.gov/references/public/ND/prescribed_burning_fact_sheet.pdf)

• **Open Burning in Kansas — When is it Allowed?**

[https://mcpersoncountyks.us/DocumentCenter/View/1874/Open\\_burning\\_in\\_Kansas?bidId=](https://mcpersoncountyks.us/DocumentCenter/View/1874/Open_burning_in_Kansas?bidId=)

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

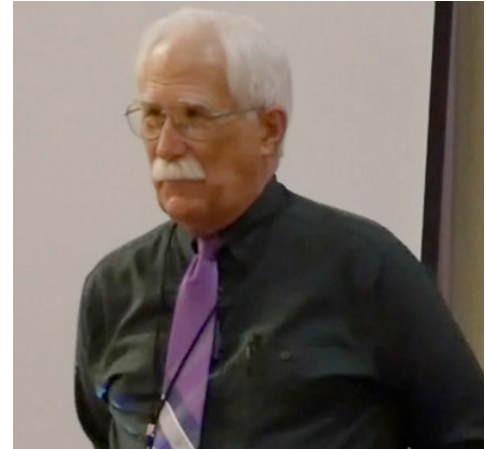
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# Radiation/Laser Safety

Exposure to non-ionizing or ionizing radiation, if not properly controlled, places employees at risk of serious health hazards.



Ron Bridges, K-State Radiation Manager

» **Review KSU Radiation Safety Manual.**

*[https://www.k-state.edu/safety/docs/radiation\\_safety\\_manual.pdf](https://www.k-state.edu/safety/docs/radiation_safety_manual.pdf)*

» **Complete the VIVID Online Introduction to Radiation Safety course.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Complete the Application for Authorization to Use Radioactive Materials at KSU (if applicable).**

*<https://www.k-state.edu/safety/docs/radioactive-materials-app.pdf>*

» **Complete the Personnel Radiation Monitoring Service Request (if applicable).**

*<https://www.k-state.edu/safety/docs/radiation-monitoring-request.pdf>*

» **Review the KSU Laser Safety Manual.**

*[https://www.k-state.edu/safety/docs/laser\\_safety\\_manual.pdf](https://www.k-state.edu/safety/docs/laser_safety_manual.pdf)*

» **Complete the VIVID Online Laser Safety Course.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Additional Resource:**

• **OSHA Radiation Overview.** *<https://www.osha.gov/SLTC/radiation/index.html>*

• **Radioactive Waste:** *<https://www.k-state.edu/safety/radiation/request.html>*

All department-specific training must be kept on file with the supervisor.

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** *<https://www.ksre.k-state.edu/agsafe/>*

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# Respiratory Protection

Respiratory protection must be provided to employees who are working in a hazardous atmosphere. The appropriate respirator will depend on the contaminants the employee will be exposed to.

- » **Review the Respiratory Standard of Practice**, which serves as an essential element in identifying and managing respirable material risk to faculty, staff, and students.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Resp%20BBBBBBBB.PDF](http://www.ksre.k-state.edu/agsafe/manuals_forms/Resp%20BBBBBBBB.PDF)
- » **Complete the VIVID Respirator Training prior to respirator use.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Complete the Respirator Assessment**, which is used to identify and evaluate respiratory hazards for each employee and must be completed prior to respirator selection.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Respirator%20Assessment%202.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Respirator%20Assessment%202.pdf)
- » **Schedule Medical Evaluations for respirator use** to determine the employee's ability to use a respirator. Contact your environmental health and safety coordinator to set up medical appointment.  
[http://www.ksre.k-state.edu/agsafe/manuals\\_forms/Respirator%20Protection\\_Appendix%20E\\_12.28.17.pdf](http://www.ksre.k-state.edu/agsafe/manuals_forms/Respirator%20Protection_Appendix%20E_12.28.17.pdf)
- » **Schedule Fit-Testing** to ensure that the selected respirator fits the employee. Contact your environmental health and safety coordinator to set up a fit-testing appointment.
- » **Complete (if applicable) the Respirator Voluntary Use for disposable N95 mask only.** The user is required to complete the OSHA Voluntary Use training video and complete APPENDIX D form; copies must be kept on file.
  - [https://www.osha.gov/video/respiratory\\_protection/voluntaryuse.html](https://www.osha.gov/video/respiratory_protection/voluntaryuse.html)
  - [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/Respirator%20Protection\\_Appendix%20D\\_12.28.17%20just%20appendix%20D.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/Respirator%20Protection_Appendix%20D_12.28.17%20just%20appendix%20D.pdf)
- » **Enroll in the KSU Respiratory Protection Program.**  
<http://www.k-state.edu/safety/occupational/respiratory-protection/>



Rick Windholz, Hays

All department-specific training and forms must be kept on file with the supervisor.

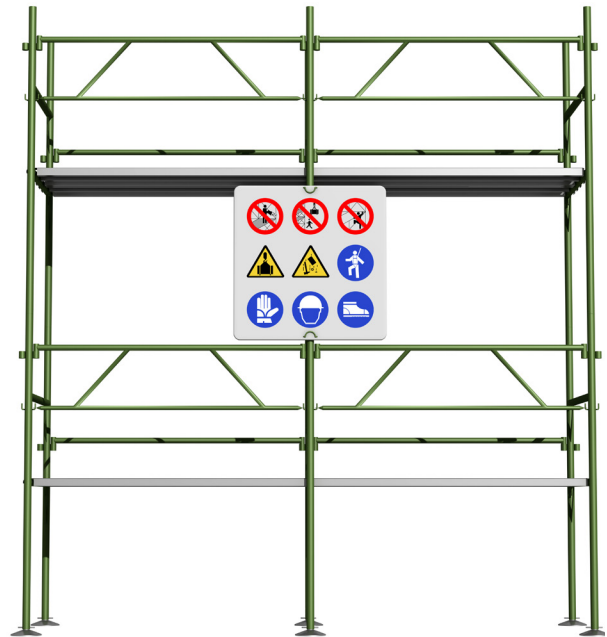
[Back to Contents](#)

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# Scaffolding Safety

Employees using scaffolding are exposed to serious hazards, such as falls from elevations, being struck by falling objects, coming in contact with overhead power lines, and poorly installed equipment causing a collapse. Employees must be trained to identify these and other hazards and know who has the authority to take corrective measures.



» **Review OSHA 29 CFR 1926.451 Scaffolding General Requirements.**

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.451>

» **Complete the VIVID Online Scaffolding Safety course.**

• *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*

» **Complete Scaffolding Competent Person 8-hour live training course.**

• *Contact the COA EH&S Office for enrollment information.*

» **Complete the Scaffolding Inspection Daily Checklist.**

<https://www.mvhabitat.org/clientuploads/pdf/Safety/Scaffold%20Inspection%20Checklist.pdf>

» **Additional Resources:**

• **OSHA Supported Scaffolds: Framed or Fabricated.**

<https://www.osha.gov/SLTC/etools/scaffolding/supported/frame.html>

• **OSHA: A Guide to Scaffolding Use.**

<https://www.osha.gov/Publications/osha3150.pdf>

• **OSHA eTools General Requirements for Scaffolds.**

[https://www.osha.gov/SLTC/etools/scaffolding/gen\\_req.html](https://www.osha.gov/SLTC/etools/scaffolding/gen_req.html)

All department-specific training must be kept on file with the supervisor.

[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Shop Safety (Shop Signs)

Employees working in shops are exposed to a variety of hazards caused by poor housekeeping, damaged tools, unguarded equipment, and failure to wear appropriate personal protective equipment.



North Agronomy Farm, Manhattan

- » **Review the Farm Shop Safety Video (SAIF).**  
<https://www.youtube.com/watch?v=05IWcbOn514>
- » **Review 29 CFR 1910.177 Servicing Multi-Piece and Single-Piece Rim Wheels** and the related publication.  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.177>  
<https://www.osha.gov/Publications/wheel/wheel-chart-booklet.pdf>
- » **Complete Shop Safety Quiz.** (Employee ID and password required.)  
[https://kstate.qualtrics.com/jfe/form/SV\\_bpvuZDfkFlbSJal](https://kstate.qualtrics.com/jfe/form/SV_bpvuZDfkFlbSJal)
- » **Perform Monthly Shop Inspections** using the Farm Hazard Inspection Checklist.  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/Farm%20Safety%20Inspection%20Checklist\\_12.03.15\\_R2.pdf](https://www.ksre.k-state.edu/agsafe/manuals_forms/Farm%20Safety%20Inspection%20Checklist_12.03.15_R2.pdf)
- » **Register and Post KSU SHOP Sign using the template found at**  
<https://www.k-state.edu/safety/occupational/shopsign/>
- » **Additional Resource:**
  - **OSHA Self-Inspection Checklist**  
<https://www.osha.gov/Publications/smallbusiness/small-business.html>

**All department-specific training must be kept on file with the supervisor.**

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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# Skid Loader Safety

Employees are exposed to many hazards such as exhaust fumes, high-pressure oils, moving parts, and flammable and corrosive materials that can cause severe injuries if not controlled when operating a skid loader.



Ross Wahl, Manhattan

- » **Review OSHA Hazards Associated with Operating a Skid Steer Loaders.**

*<https://www.osha.gov/dts/shib/shib011209.html>*

- » **Complete the CITI Skid Loader Training.**

*<https://www.ksre.k-state.edu/agsafe/training/index.html>*

- » **Complete an Operator Performance Audit using this evaluation form.**

*[http://nasdonline.org/static\\_content/documents/1928/Eval\\_PerformanceChecklist\\_SkidSteerLoader.pdf](http://nasdonline.org/static_content/documents/1928/Eval_PerformanceChecklist_SkidSteerLoader.pdf)*

- » **Complete the Skid Loader Operator Pre-Use Inspection using the form below or an inspection form provided by the specific equipment manufacturer.**

*<http://s7d2.scene7.com/is/content/Caterpillar/CM20180702-41597-22304>*

- » **Additional Resource:**

- **Preventing Injuries and Deaths from Skid-Steer Loaders — CDC.**

*<https://www.cdc.gov/niosh/docs/2011-128/pdfs/2011-128.pdf>*

- **Skid Steer Loader Safety (MF2711)**

*<https://www.bookstore.ksre.ksu.edu/pubs/MF2711.pdf>*

All department-specific training must be kept on file with the supervisor.

**Back to Contents**



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# Spill Prevention, Control, and Countermeasure (SPCC) Program

Oil spills of any type are dangerous to public health, drinking water, and natural resources. Facilities that store oil in quantities specified by the EPA must have an SPCC plan. Employees must be trained and have the ability to respond effectively in an emergency.



Eric Adee, Topeka

- » **Review the EPA SPCC Regulation 40 CFR part 112, “A Facility Owner/Operator’s Guide to Oil Pollution Prevention.”**  
<https://www.epa.gov/sites/production/files/documents/spccbluebroch.pdf>
- » **Contact the K-State Environmental Health and Safety Hazardous Waste Manager about questions involving your plan or if your facility needs a plan.** Follow EPA guidelines for plan changes and five-year renewal.
- » **Complete the VIVID Online Oil Spill, Control, and Countermeasures (SPCC) training.** Initial New Hire and Annual Training is required.
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Additional Resources:**
  - **EPA Oil Spill Prevention and Preparedness Regulations.**  
<https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>
  - **Spill Prevention, Control, and Countermeasure (SPCC) for Agriculture.** Note: K-State follows the original threshold of 1,320 gallons for facilities not the agriculture standard of 2,500 gallons.  
<https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spill-prevention-control-and-countermeasure-spcc>

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[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Tractor Safety

Employees operating tractors are exposed to serious hazards such as rollovers, run-overs, getting caught in moving parts, and collisions. Employees must develop safe work practices to prevent serious injury or death.



Hutchinson, Kansas

- » Review the COA Tractor Operations Standard Operating Procedure (SOP).
- » Complete the all Tractor Operations training as specified in Appendix A in the SOP.
- » Complete Tractor Operators Performance Evaluations as specified in Appendix D in the SOP.
- » Complete Pre-Use Tractor Inspection Checklist using Appendix C in the SOP.
  - Tractor Operations SOP Link: [https://www.ksre.k-state.edu/agsafe/manuals\\_forms/index.html](https://www.ksre.k-state.edu/agsafe/manuals_forms/index.html)
- » Complete the Tractor Safety quiz (from MF2708) in Qualtrics. (Employee ID and password required).  
[https://kstate.qualtrics.com/jfe/form/SV\\_8wgT5y5fXWWdodn](https://kstate.qualtrics.com/jfe/form/SV_8wgT5y5fXWWdodn)
- » Additional Resources:
  - Tractor Safety Basic Operation Part 1 Video.  
<https://www.youtube.com/watch?v=VX6725s95p4>
  - Tractor Safety Basic Operation Part 2 Video.  
[https://www.youtube.com/watch?v=FUmXNHU\\_z1Q&list=PLl-QLNcYL6hQ2CaGwiTmTiEkBUbvm7gev](https://www.youtube.com/watch?v=FUmXNHU_z1Q&list=PLl-QLNcYL6hQ2CaGwiTmTiEkBUbvm7gev)
  - OSHA Protecting Agriculture Workers from Tractor Hazards.  
<https://www.osha.gov/Publications/OSHA3835.pdf>
  - Tractor Safety (MF2708)  
<https://www.bookstore.ksre.ksu.edu/pubs/MF2708.pdf>

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[Back to Contents](#)

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# Utility Vehicle Safety

Employee use of utility-type vehicles in agriculture is growing. Vehicle operators must be educated and responsible to incorporate safe work practices to prevent injuries from overturns, not wearing seat belts, riding in bed, operating on steep or uneven terrain, not keeping body parts inside the machine, and failure to inspect prior to use.



Leland and Jim Kimball, Ottawa

- » **Review the (DRAFT) KSU Industrial and Utility Mobile Equipment Policy PPM 3700, which gives vehicle examples.**  
[https://www.ksre.k-state.edu/agsafe/manuals\\_forms/](https://www.ksre.k-state.edu/agsafe/manuals_forms/)
- » **Complete the In Control: ATV and Farm Utility Vehicle Safety Part 1.**  
<https://www.youtube.com/watch?v=f07Pkl14xqU>
- » **Complete the In Control: ATV and Farm Utility Vehicle Safety Part 2.**  
<https://www.youtube.com/watch?v=YUm9rwnu-GM>
- » **Complete the ATV Institute: ATV Online E-Course.**  
<https://cvt.svia.org/login/index.php>
- » **Complete the Utility Vehicle Safety quiz in Qualtrics.** (Employee ID and password required).  
[https://kstate.qualtrics.com/jfe/form/SV\\_09eNQ0V8ccVBRBz](https://kstate.qualtrics.com/jfe/form/SV_09eNQ0V8ccVBRBz)
- » **Additional Resources:**
  - **OSHA Hazards Associated with All-Terrain Vehicles (ATVs) in the Workplace.**  
<https://www.osha.gov/dts/shib/shib080306.html>
  - **CDC All-Terrain Vehicles (ATV) Safety at Work.**  
<https://aghealth.nih.gov/participants/atv.insert.pdf>
  - **SAIF Farm (ATV) Safety Video.**  
<https://www.youtube.com/watch?v=XSDWmnmTtng>

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[Back to Contents](#)

Environmental Health and Safety Programs at Work for You <https://www.ksre.k-state.edu/agsafe/>

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# Walking and Working Surfaces

Employees accessing or working from any horizontal or vertical surface that is not properly maintained or constructed can suffer from sprains, strains, and broken bones. Falls from elevated platforms or open-sided floors can result in death. Employees must have knowledge of the hazards and control measures to prevent harm.



- » **Review OSHA CFR 1910.22 Walking-Working Surfaces General Requirements.**  
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.22>
- » **Complete the VIVID Online Slips, Trips, and Falls course.**
  - *Contact your departmental safety coordinator or COA EH&S office for enrollment assistance with the VIVID system.*
- » **Additional Resources:**
  - **National Grain Federation Association Walking Working Surfaces Guidance Document (May 2018).**  
[https://drive.google.com/file/d/1vyb1rLtImf6\\_O1L9P0yczi8UGnEWReEP/view](https://drive.google.com/file/d/1vyb1rLtImf6_O1L9P0yczi8UGnEWReEP/view)
  - **OSHA Final Rule Fact Sheet General Industry Walking Working Surfaces.**  
<https://www.osha.gov/Publications/OSHA3903.pdf>
  - **Walking Working Surfaces and Personal Fall Protection Final Rule Frequently Asked Questions.**  
<https://www.osha.gov/walking-working-surfaces/faq.html>

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[Back to Contents](#)

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# Worker Protection Standard

EPA's Agriculture Worker Protection Standard (WPS) is aimed at reducing the risk of pesticide poisoning and injury among agricultural workers and pesticide handlers.



- » **Review EPA Pesticide Worker Safety**, which serves as an essential element in identifying and managing risk to staff associated with pesticide materials.  
<https://www.epa.gov/pesticide-worker-safety/agricultural-worker-protection-standard-wps>  
<https://www.epa.gov/pesticide-worker-safety/pesticide-worker-protection-standard-how-comply-manual>
- » **Complete the WPS Training Class (CITI) online course** for any employee classified as a pesticide worker or pesticide handler. Retraining is required annually.  
[http://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions\\_06.21.16.pdf](http://www.ksre.k-state.edu/agsafe/training/CITI%20WPS%20Training%20Instructions_06.21.16.pdf)
- » **Review OSU Pesticide and Fertilizer Facility Operations Checklist.**  
<http://factsheets.okstate.edu/documents/bae-1012-pesticide-and-fertilizer-facility-operations-checklist/>
- » **Review Reading a Pesticide Label (MF3071).** Pesticide users are required by law to comply with the instructions on the label.  
<https://www.bookstore.ksre.ksu.edu/pubs/MF3071.pdf>

Employees completing the CITI training will be issued a certification card from the College of Agriculture Environmental Health and Safety office that is valid one year from the training completion date.

[Back to Contents](#)

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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### **Additional Safety-Related Publications from K-State Research and Extension:**

Originally for the landscaping and horticultural services and fruit and vegetable industries, these publications are applicable in a variety of settings. Many of these are also available in Spanish (add S to the publication number when you search).

**MF2708, Tractor Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2708.pdf>

**MF2709, Motor Vehicle Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2709.pdf>

**MF2710, Chipper/Shredder Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2710.pdf>

**MF2711, Skid Steer Loader Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2711.pdf>

**MF2712, Tree Trimming Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2712.pdf>

**MF2713, Aerial Lift Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2713.pdf>

**MF2714, Mowing and Trimming Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2714.pdf>

**MF2715, Guide to Managing Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2715.pdf>

**MF2716, Instructor Guide for the Landscaping and Horticultural Services Industry,**  
<https://www.bookstore.ksre.k-state.edu/pubs/MF2716.pdf>

**MF2766, Back Injury Prevention for the Landscaping and Horticultural Services Industry,**  
<https://www.bookstore.ksre.k-state.edu/pubs/MF2766.pdf>

**MF2758, Machine Hazards,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2758.pdf>

**MF2759, Lift Truck Safety,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2759.pdf>

**MF2760, Working Safely Around Hazardous Substances,**  
<https://www.bookstore.ksre.k-state.edu/pubs/MF2760.pdf>

**MF2761, Fall Prevention,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2761.pdf>

**MF2762, Back Injury Prevention for the Fruit and Vegetable Preserving Industry,**  
<https://www.bookstore.ksre.k-state.edu/pubs/MF2762.pdf>

**MF2763, Guide to Managing Safety for Employers and Supervisors in the Fruit and Vegetable Preserving and Specialty Foods Manufacturing Industry,**  
<https://www.bookstore.ksre.k-state.edu/pubs/MF2763.pdf>

**MF2764, Instructor Guide for the Fruit and Vegetable Preserving and Specialty Foods Manufacturing Industry,** <https://www.bookstore.ksre.k-state.edu/pubs/MF2764.pdf>

**Back to Contents**

**Environmental Health and Safety Programs at Work for You** <https://www.ksre.k-state.edu/agsafe/>

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## IMPLEMENTING a safety & health program



can help employers avoid the



**INDIRECT COSTS**  
that result  
from

**WORKPLACE INCIDENTS**

such as



These **INDIRECT COSTS** have been estimated to be at least

**2.7**  
times the  
**DIRECT COSTS**



**KANSAS STATE**  
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