



AgBioResearch  
**MICHIGAN STATE UNIVERSITY**

# Complying with the Worker Protection Standard at Michigan State University

Position Statement, Requirements, Procedures and Guidelines



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## Position Statement

The Worker Protection Standard (WPS) is a federal pesticide use regulation (40 CFR Part 171) administered by the U.S. Environmental Protection Agency (EPA) and enforced by the Michigan Department of Agriculture and Rural Development (MDARD). The following guidelines and requirements are implemented to ensure compliance with all WPS elements, which aim to reduce the risks of illness or injury to Michigan State University employees from occupational exposure to pesticides used in the production of agricultural plants at agricultural establishments, such as farms, forests, nurseries, and enclosed spaces like greenhouses.

The text in this document paraphrases or simplifies language taken directly from the EPA's "How to Comply with the 2015 Revised Worker Protection Standard for Agricultural Pesticides" (further referred to as "How to Comply manual"). It is important to note that in some instances the requirements and guidelines outlined in this document may be more restrictive than those written in the How to Comply manual. However, the more restrictive requirements are written with employee, researcher, student and stakeholder health and safety in mind.

It is essential to recognize that WPS requirements apply exclusively to individuals employed by MSU, as defined by their roles as handlers or workers. However, given that MSU AgBioResearch establishments serve as research-based learning environments, there may be instances where individuals, such as students and volunteers, perform tasks related to agricultural work without compensation. Although these individuals may not meet the full definition of worker or handler, MSU, as a leader in the agriculture space, acknowledges its responsibility to educate about potential risks associated with pesticide exposure and endeavors to adhere to WPS requirements even in these unique circumstances.



## Requirements

- 1) Michigan State University, its employees, researchers, and employed students must comply with all requirements detailed in the Worker Protection Standard (WPS) when utilizing pesticides for agriculture-use related purposes.
- 2) All MSU-employed Pesticide Applicators are required to have a current Commercial Pesticide Certification issued by the Michigan Department of Agriculture and Rural Development (MDARD). The certification must be valid and endorsed with the appropriate categories in which the individual will be making applications.
- 3) MSU prohibits individuals from performing handler-related tasks without possessing a valid Commercial Pesticide Certification issued by MDARD.
- 4) Before any agriculture use-related pesticide applications are performed, the applicator must undergo MSU Applicator Training. The Applicator training shall be administered to applicators by the MSU AgBioResearch Operations and Compliance Manager. The applicator training must be re-administered every renewal cycle of the individual's certification (3 years).
- 5) Any employee, researcher, or student who regularly handles pesticide-treated plant material and lacks a current Commercial Pesticide Certification issued by MDARD must undergo WPS *worker* training and WPS site-specific training. These training sessions, conducted by qualified MSU staff, are required before commencing any work. WPS *worker* training must be renewed annually (every 365 days).
- 6) Facility Managers and Principal Investigators at MSU agriculture establishments are responsible for actively identifying any employees, researchers, or students lacking a valid commercial pesticide certification or who have not completed the requirements WPS pesticide safety *worker* training and restrict access to areas where pesticides have been applied within the past 30 days or where pesticides are stored, mixed, or handled.
- 7) All employees, researchers, and students who will be entering MSU agriculture-related establishments where pesticides have been applied in the past 30 days are required to visit the central notification area before the onset of their work to check which areas may be under a restricted entry interval, where decontamination areas are located, and if any area at the facility is under a double notification requirement.
- 8) Any employee, researcher, or student demonstrating willful negligence toward any of the requirements outlined in this document will be subject to disciplinary action consistent with MSU disciplinary policies and procedures. Willful negligence includes but is not limited to,



deliberate disregard for safety protocols, failure to complete required training, and knowingly violating pesticide-use-related regulations.

9) MSU, as the agricultural employer, cannot retaliate in any manner if any worker or handler:

- Refuses to participate in any activity that the worker or handler reasonably believes to be in violation of the WPS,
  - Has, or is about to, report WPS noncompliance to appropriate authorities for enforcement of WPS provisions, or
  - Agrees to provide information to the EPA or any duly authorized representative of a Federal, State or Tribal government about WPS compliance, or assists or participates in any manner in an investigation, proceeding, or hearing concerning WPS compliance.
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## Scope

These Worker Protection Standard (WPS) guidelines apply exclusively to pesticides designated for Agricultural Use (as defined) at all applicable establishments within MSU College of Agriculture and Natural Resources (CANR), Student Life & Engagement (SLE), and Infrastructure, Planning, and Facilities (IPF), as outlined below.

- MSU AgBioResearch (ABR)
  - Agriculture and Natural Resource - Research and Extension Centers (ANRREC)
  - Kellogg Biological Research Station (KBS)
  - Plant Science Greenhouses
  - Growth Chambers/Labs
  
- MSU Extension
  - Tollgate Farm and Education Center
  - MSU-Detroit Partnership for Food, Learning and Innovation
  
- MSU Student Life Engagement
  - MSU Student Organic Farm
  - Bailey Greenhouse
  
- MSU Infrastructure, Planning, and Facilities
  - Beaumont Nursery
  - Hidden Lake Gardens

WPS applies when a pesticide has an “Agricultural Use Requirements” (see example below) section on the pesticide label and will be applied on/at the establishment.

Please note the emphasis on the term Agriculture. The WPS does not apply when pesticides are used for a non-ag related purpose. This is explained in detail later in the document.

### **AGRICULTURAL USE REQUIREMENTS**

**Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment, restricted-entry intervals and notification of workers.**



## Exemptions

The pesticide label information does not always provide all that is needed to comply with the WPS. The WPS **does not apply** when pesticides are used for the following purposes.

Note: The Worker Protection Standard (WPS) does not apply in these circumstances because the WPS specifically regulates pesticide use on agricultural crops where *workers (not applicators)* may be exposed during, or after, pesticide application. *Italic text provides context as to why it does not apply.*

- on pastures - *WPS targets agricultural crops, not pastures*
- to control rodents - *WPS is for pesticide use on plants, not pests like rodents*
- as bait in traps - *WPS does not cover non-plant pesticide uses such as in traps.*
- on harvested plants - *WPS applies during crop production, not after harvest.*
- for public pest control - *WPS is for agricultural settings, not public or municipal pest control.*
- on livestock - *WPS is for crops, not animals.*
- on home fruit, vegetable gardens or lawns - *WPS does not cover private, non-commercial garden settings.*
- on non-crop areas such as along roadways - *WPS applies only to agricultural production areas, not non-crop sites.*

There are instances at Michigan State University where researchers apply pesticides for experimental or research purposes. In some cases, the researchers may receive pesticides from the manufacturer with pesticide labels that do not include the “Agricultural Use Requirements” box on the label. Pesticides that do not have an “Agriculture Use Requirements” box on their label are **not** subject to WPS requirements. Pesticides used for experimental or research purposes that have an “Agriculture Use Requirements” box on the label are required to comply with all aspects of WPS.

## WPS Penalties and Fines

Currently, a federal civil penalty of up to \$2,750 per violation may be assessed against private applicators (owners/operators of agricultural establishments) and other persons, and up to \$18,750 per violation against commercial applicators (owners/operators of pesticide handler establishments) and other persons. Since Congress passed the Civil Monetary Penalty Inflation Adjustment Rule under the Debt Collection Improvement Act of 1996, as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, civil penalties have been increased due to inflation and Congress’ intent on creating deterrence to noncompliance.



## Examples

The following examples serve to clarify which individuals are subject to WPS requirements at MSU agricultural establishments:

***Employees** of a researcher or laboratory handling pesticide-treated plant material as a part of their job duties must comply with WPS requirements.*

***Students or Volunteers** who are not employed by MSU but handle pesticide-treated plant material regularly throughout a semester for a club or student-registered organization must comply with WPS requirements. (Note: Compliance is required because the club or organization may receive compensation for the plant material.)*

***Students or Volunteers** who handle pesticide-treated plant material during a learning or instructional period are **not** subject to WPS requirements. (Note: This exemption applies because they are not employed and therefore do not meet the definition of "worker" or "handler.")*

For comprehensive WPS requirements, please consult the EPA's ["How to Comply with the 2015 Revised Worker Protection Standard for Agricultural Pesticides" manual](#) or contact the MSU AgBioResearch Operations and Compliance Manager.

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## Definitions

**Agriculture Use** – Pesticides used to aid in growing, maintaining, or the production of agricultural plants (includes, but is not limited to, grains, fruits, and vegetables; wood fiber or timber products; flowering and foliage plants and trees; seedlings and transplants; and turf grass produced for sod) for commercial and/or research or experimental purposes. Commercial production includes the production of plants for sale, trade, or in-house use on the establishment or another facility.

**ANRREC** – Acronym for **A**griculture and **N**atural **R**esource **R**esearch and **E**xtension **C**enters.

**Applicator** - A person who mixes, loads, and applies pesticides. This person must possess a valid Commercial Pesticide Certification issued by the Michigan Department of Agriculture and Rural Development.

**Application exclusion zone (AEZ)** - the immediate area surrounding the application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications.

**Early entry** – entry into a treated area on the agricultural establishment after a pesticide application is complete but before any restricted-entry interval (REI) for the pesticide has expired. MSU prohibits early entry by *workers*. Only Certified pesticide applicators are authorized to enter an active REI.

**Employ** - to obtain, directly or through a labor contractor, the services of a person in exchange for a salary or wages, including piece-rate wages, without regard to who may pay or who may receive the salary or wages. It includes obtaining the services of a self-employed person, an independent contractor, or a person compensated by a third party, except that it does not include an agricultural employer obtaining the services of a handler through a commercial pesticide handler employer or a commercial pesticide handling establishment.

**Handler** – any person who is employed by MSU and performs any of the following activities:

- Performs *Applicator* (see definition) related tasks.
- Disposing of a pesticide
- Handling opened containers of pesticides, emptying, triple-rinsing, or cleaning pesticide containers according to pesticide product labeling instructions or disposing of pesticide containers that have not been cleaned.
- Acting as a flagger



- Cleaning, adjusting, handling, or repairing the parts of mixing, loading or application equipment that may contain pesticide residues
- Assisting with the application of pesticides
- Entering an enclosed space after the application of a pesticide and before the inhalation exposure level listed in the labeling has been reached or one of the ventilation criteria established by WPS or the labeling has been met to operate ventilation equipment, monitor air levels, or adjust or remove coverings used in fumigation, entering a treated area outdoors after application of any soil fumigant during the labeling-specified entry-restricted period to adjust or remove coverings used in fumigation, and

*\*Note: Michigan State University does not allow a person to meet the definition of a handler without possessing a valid Commercial Pesticide Application Certification issued by the Michigan Department of Agriculture and Rural Development.*

**Personal protective equipment (PPE)** – devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including, but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical resistant headgear, and protective eyewear.

**Principal Investigator (PI)** - The individual responsible for preparing, conducting, and administering a research grant, cooperative agreement, training or public service project, contract, or other sponsored project.

**Restricted-entry interval (REI)** - the time after the end of a pesticide application during which entry into the treated area is restricted.

**Safety data sheet (SDS)** – has the same meaning as the definition at 29 CFR 1910.1200(c).

**Treated area** - any area to which a pesticide is being applied or has been applied.

**Use** – as in “to use a pesticide” means any of the following:

- Pre-application activities, including, but not limited to:
  - Arranging for the application of the pesticide,
  - Mixing and loading the pesticide,
  - Making necessary preparations for the application of the pesticide, including responsibilities related to worker notification, training of workers or handlers, providing decontamination supplies, providing pesticide safety information and pesticide application and hazard information, use and care of personal protective equipment, providing emergency assistance, and heat stress management.
- Application of a pesticide.
- Post-application activities intended to reduce the risks of illness and injury resulting from handlers’ and workers’ occupational exposures to pesticide residues during and after the



restricted-entry interval, including responsibilities related to worker notification, training of workers or early-entry workers, providing decontamination supplies, providing pesticide safety information and pesticide application and hazard information, use and care of personal protective equipment, providing emergency assistance, and heat stress management.

- Other pesticide-related activities, including transporting or storing pesticides that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, and equipment.

**Volunteer** - individual or group freely giving time and labor to aid the mission of Michigan State University.

**Worker** – any person who is employed by MSU and performs activities directly relating to the production of agricultural plants in an agricultural establishment. Activities include:

- hand weeding
  - pruning
  - carrying nursery stock;
  - repotting plants;
  - watering; or
  - picking or harvesting
  - other tasks directly related to the production of agricultural plants on an agricultural establishment.
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# Accountability and Responsibility

The following sections delineate accountability and responsibility with respect to compliance of WPS regulations at Michigan State University.

## **Associate Director - AgBioResearch**

The Associate Director of AgBioResearch oversees and administers the ANRREC establishment. The Associate Director is accountable and responsible for ensuring compliance with all regulatory matters across the ANRREC establishment. The Associate Director has delegated authority, accountability, and responsibility for WPS compliance to the Operations and Compliance Manager.

## **Operations and Compliance Manager - AgBioResearch**

The Operations and Compliance Manager is accountable and responsible for the contents of this document and ensuring WPS compliance across all facilities within the defined scope.

## **Facility Managers**

Facility Managers are responsible for implementing the requirements and guidelines outlined in this document and ensuring compliance with the WPS and their direct subordinates.

## **Principal Investigator (PI)**

Principal Investigators are accountable and responsible for complying with the requirements and guidelines outlined in this document and for ensuring WPS compliance for their entire lab (if applicable) and of their direct subordinates.



# Procedures and Guidelines

## Training

### Pesticide Safety *Worker* Training

All people who do not have a pesticide applicator certification and performing worker-related tasks at MSU must receive annual (365-day period) Worker Protection Standard (WPS) Pesticide Safety *Worker* Training. This training must be completed before performing any tasks at MSU's agriculture-related establishments.

#### Virtual Training administered by ORRS

The Office of Research Regulatory Support (ORRS) staff administers EPA-compliant Pesticide Safety Worker training via Zoom. Participants must prioritize this training by planning ahead and ensuring their Zoom application and computer are fully updated in advance. For the best experience, we strongly recommend participating through a desktop or laptop rather than a mobile device. Please note that if you are not present for the entire duration of the training, the participant's training will be considered invalid.

#### Training Details

- Pesticide Safety Worker Training is administered through the [ABILITY](#) online portal by the Office of Regulatory Research Support.
- Training sessions are typically held bi-weekly.
- Link to training schedule: [Training Program Help and FAQ](#)

#### Enrollment Process

- Workers must enroll in the training via the [ABILITY](#) system.
- After enrollment, participants will receive detailed instructions about attendance and course completion via email.

#### Attendance and Completion

- Workers must be on time and attend the entire training session (90 minutes).
- After completing the training, workers must upload the signed course completion form (received at the completion of the course) to their ABILITY profile within 48 hours. For directions to upload the course completion form [CLICK HERE](#)



### Certification Submission

- Upon completion, workers must email a copy of their WPS training certificate to the facility manager of the research centers where they will be working.
- Link to Site Contacts: [Site Training Contacts](#)

### Site-Specific Safety Orientation

- Workers must then undergo a one-time, site-specific Pesticide Safety orientation at each research location where they perform worker-related tasks. This orientation must be arranged prior to the worker's first visit to the facility. The facility manager is the person to contact for this training.

### Notes

- If a worker's annual WPS training lapses, they cannot enter a site where pesticides have been applied in the last 30 days under any circumstance.
- It is the worker and their supervisor's responsibility to ensure the training remains up to date. Workers will receive automated email notices 60 days before their training lapses.

### **In-Person *Worker* Training administered by Certified Applicators**

There is an in-person Worker training option available for part-time and full-time employees who require training in urgent instances.

### Training Details

- There is one approved Pesticide Safety *Worker* trainer per facility. Please visit [this link](#) so see who to contact if you require in-person Pesticide Safety *Worker* Training.

Note: Site contacts are not obliged to provide on-demand WPS training for individuals they don't directly supervise. Please understand that providing training can be time-intensive, and requests for training outside of supervisory duties should be carefully considered.

### Qualifications to Administer Training

- Commercially-certified applicators employed by MSU may administer in-person Pesticide Safety Worker Training for the site they supervise, provided all the following conditions are met:
  1. The applicator's certification is valid.
  2. The applicator obtains one-time written approval from the Operations and Compliance Manager for ANRREC.



3. The applicator completes the National Worker Protection Standard (WPS): Web-Based Training for Trainers of Agricultural Workers and Pesticide Handlers.
4. Visit [WPS Trainers Instructions](#) for next steps.

### **Pesticide Safety *Applicator* Training**

All people performing *applicator*-related tasks at MSU agriculture-related establishments and employed at Michigan State University must receive WPS Pesticide Safety *handler* training prior to performing any pesticide applications.

#### **Virtual Training administered by AgBioResearch**

##### Training Details

- The Operations and Compliance Manager of AgBioResearch administers Applicator Training on a monthly basis and as needed for new hires.
- Applicators must receive WPS Pesticide Safety *handler* training before they perform any *applicator*-related task at any MSU agriculture-related establishment. This training must be re-administered in concert with their commercial pesticide applicators certification (3 years).

##### Enrollment Process

- Applicators can enroll through [this webpage](#)

##### Attendance and Completion

- Applicators must arrive on time and attend the entire training session.
- After training, the applicator will receive a training certificate.

##### Notes:

- This training is intended to train applicators on MSU specific pesticide application guidelines and educate on any pending regulatory changes or updates.

(Continued on next page)



## Pesticide Safety *Site-Specific* Training

All individuals who meet the definition of *worker* or *applicator* and are employed by Michigan State University (MSU) must complete a one-time Pesticide Safety Site-Specific orientation training before performing any worker or handler-related tasks at the research center. If a worker or handler is working at multiple research centers, they must complete the site-specific training for each site.

### Onsite Training

#### Training Details

- Pesticide Safety Site-Specific Orientation Training is administered on-site by any commercial applicator based at the research center.
- The commercial applicator must train the worker or applicator on the following locations:
  1. Pesticide safety information poster (see the “Central Posting Area Requirements” section)
  2. Pesticide application and hazard information (see the “Central Posting Area Requirements” section)
  3. Location of decontamination supplies
  4. Location of the Chemical Hygiene Plan ([Link Here](#))
  5. Hazardous Waste Guidance, SDS, Standard Operating Procedures ([Link Here](#))
  6. Chemical storage, labeling, inventory, and proper use ([Link here](#))
  7. Handling of solid waste, liquid waste, broken glass, razor blades, needles/syringes ([Link here](#))
  8. Chemical spill kit location and procedures

#### Enrollment Process

- The worker or applicator enrolls in Pesticide Safety Site Specific orientation training via email request to the designated [site contacts](#).

#### Completion Process

- After the site-specific training, the training administrator must notify the facility manager of the participant’s completion, and the facility manager must update the participant’s ABILITY profile.



## Training Records

MSU ORRS staff shall maintain training records for each worker and applicator. Worker records must be kept for two years from the date of training. Applicators records must be maintained a minimum of four years from the date of issue.

### Training Record Requirements

- The following elements must be recorded for each training participant
    1. The worker's printed name and signature (digital font-type signatures are not compliant).
    2. The date of the training.
    3. The trainer's name
    4. Evidence of the trainer's qualifications to conduct the training
    5. The employer's name
    6. Information identifying which EPA-approved training materials were used (e.g., EPA document number or EPA approval number)
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## Central Posting Area

Michigan State University must display the following information at a central location whenever any worker they employ is working and has applied a WPS-labeled pesticide product within the past 30 days, or a restricted-entry interval (REI) for such pesticide has been in effect.

### Central Posting Area Requirements

#### Required Information

- **Pesticide Safety Information Poster**

The pesticide safety information will be displayed on a poster provided by the Operations and Compliance Manager to each facility. This poster must be filled out completely and accurately by the facility manager or a designated representative. It must also be displayed at any permanent decontamination site and at any location where decontamination supplies are required for 11 or more workers.

- **Pesticide Application Information**

The following information must be kept at the establishment (either electronically or in hardcopy) for **2 years**. Additionally, it must be displayed or available to workers at the central posting area for **30 days**. Finally, the following information must be posted to the central posting area within 24 hours of the application's conclusion.

1. Common name of the pesticide applied
2. Active ingredient(s)
3. EPA registration number
4. Restricted Entry Interval
5. Target pest, purpose, or crop site
6. Location and description of treated areas
7. Date(s) and times the application started and ended
8. Applicator and Certification Number

- **Hazard Information**

A copy of the Safety Data Sheet (SDS) for each pesticide product in use at the farm/greenhouse must be kept in an area available to workers. For up-to-date SDS sheets, farm managers must gather them from the manufacturer's website or [Greenbook.net](http://Greenbook.net). Facility managers and Principal Investigators performing research at the center are responsible for ensuring the SDS sheets available at the central posting area are the most current available.



### Central Posting Area Locations

- Pesticide safety, application, and hazard information must be displayed at a central location within MSU facilities that is readily accessible during normal work hours and visible to workers.

### Central Posting Area Display Operating Periods

- MSU facilities must continuously display pesticide safety, pesticide application, and hazard information for at least 30 days after the REI expires.

## Central Posting Area Interface

To effectively communicate the information required by WPS, the central posting area will include a map of the research center. This map must include all properties associated with the farm or facility and delineate:

1. Property boundaries\*
  2. Field boundaries\*
  3. Field names\*
  4. Plot boundaries\*
  5. Plot names\*
  6. Decontamination site(s)
  7. Central notification area(s)
  8. Other information deemed pertinent by the facility manager.
- \*In greenhouses and growth chambers, the map should clearly indicate the location of each individual greenhouse section or growth chamber.*

This map must be designed to easily indicate which areas of the facility are under a REI.

## Notification Requirements

### Pesticide Application Notification

- Within 24 hours of the conclusion of any pesticide application, the applicator must indicate on the central notification area map the following details
  1. The areas where pesticide applications were made
  2. The application start and end time
  3. The longest REI of the pesticide products being used



- This will enable facility users to quickly determine which parts of the facility are under an REI. The farm manager or their designee is responsible for resetting the map at the start of the following workday to remove any expired REIs.

### Double Notification

- MSU occasionally applies pesticide products that require “double notification.” These products have labeling statements that require both posting warning signs at treated areas and providing oral notification to workers. MSU must ensure both forms of notification when the labeling requires double notification. This is completed by the following steps.
    1. **Oral Notification**

Applicators must verbally communicate with all employees, researchers, and students present at the research center at the conclusion of the pesticide application.
    2. **Central Notification**

For workers or applicators who are not full-time employees at the specific facility (e.g., a student visiting to check on research), it is ***their responsibility*** to check the central notification area upon arrival at the farm and prior to entering their work area. The central notification area will detail that a double notification is in effect at a specific location on the farm. It is then the responsibility of these individuals to contact the farm manager or the responsible applicator either by telephone or in person to receive the verbal notification portion of the double notification requirement before entering their work areas.
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## Decontamination Area(s) Requirements

To prevent or mitigate pesticide exposures, Michigan State University is required to provide supplies to each worker or applicator with supplies for routine washing to remove pesticide residues, emergency decontamination, and immediate eye flushing in certain situations. Below are what supplies must be provided, when, where, and for how long.

### **Routine Decontamination Supplies for *Workers and Handlers***

#### **Permanent Decontamination Site**

- Every facility which applies pesticide for agriculture use must have a permanent decontamination site where workers and applicators may put on or remove PPE and decontaminate, as necessary. This area must be reasonable accessible to workers and applicators, outside of any treated area or an area under and REI, at any permanent mixing and loading site, and at the site where PPE is removed. Each permanent decontamination site must have the following elements.
  1. Water for routine cleaning,
  2. soap,
  3. single-use towels,
  4. change of clothes and
  5. laminated 8.5" x 11" Pesticide Safety Information Poster

### **Emergency Decontamination Supplies for *Workers in the Field***

Facility Managers are responsible for ensuring the following requirements are met.

#### **Location**

- All decontamination supplies must be located together and be reasonably accessible to the workers' work area, within  $\frac{1}{4}$  mile of where they are working. These supplies must be outside any treated area or an area under a REI.

#### **Supplies**

- **Water**  
Clean, running water (from a functioning hydrant or spigot with potable water) OR at least 1 gallon of water per worker at the start of the work period. The water



must be of a quality and temperature that will not cause injury or illness if it meets the skin, eyes, or is ingested. If the water source is used for mixing pesticides, it cannot be used for decontamination unless additional precautions are taken to prevent contamination, such as a back-flow prevention device or air gap.

- **Soap and Single-Use Towels**  
Sufficient soap and single-use towels for workers' needs. Hand sanitizers or wet towelettes do not meet the requirement for soap and towels.
- **Pesticide Safety Information Poster:**  
A laminated 8.5" x 11" pesticide safety information poster filled out with up to date and accurate information

## **Emergency Decontamination Supplies for *Applicators* in the Field**

### **Emergency Eye Flush Requirements**

- Michigan State University must provide each applicator with at least 1 pint of emergency eye flush water when the pesticide labeling requires protective eyewear for the handling task being performed. The emergency eye flush water must be **immediately accessible**. (i.e., be on the person or within immediate reach).

### **Location**

- All decontamination supplies for applicators must be located together and be reasonably accessible to where the applicators are working (within ¼ mile applicators. Preferably with the applicator).

### **Supplies**

- **Water**  
The water must be of a quality and temperature that will not cause illness or injury when it contacts the skin or eyes or if swallowed. If a water source is used for mixing pesticides, it cannot be used for decontamination without additional precautions taken to prevent contamination of the water with pesticides (e.g., back-flow prevention device, air gap, etc.). However, if it is not available, the following amounts must be met:
  - a. 3 gallons or more per handler of water is required at the start of the work period; OR



- b. Emergency eye flushing station - emergency eye flushing supplies must be provided at any site where handlers are mixing or loading a pesticide that
  - c. requires protective eyewear or are mixing or loading any pesticide using a closed system operating under pressure.
- **Soap and Single-Use Towels**  
Enough for handlers' needs. Hand sanitizers or wet towels do not meet the requirement for soap or towels.
  - **Clean Change of Clothes**  
Such as one-size-fits-all coveralls, to put on if the handlers' clothes are contaminated and need to be removed right away.
  - **Pesticide Safety Information Poster:**  
Laminated 8.5" x 11" Pesticide Safety Information Poster

### **Decontamination Supplies Availability Period(s)**

#### **Requirements**

- Michigan State University must provide decontamination supplies to workers doing worker tasks for the following time periods depending on the length of the REI.
    - If the REI is greater than 4 hours, provide the decontamination supplies until 30 days after the end of the REI.
    - If the REI is less than or equal to 4 hours, provide the decontamination supplies until 7 days after the end of the REI.
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## Before the Pesticide Application

To prevent or mitigate pesticide exposures, Michigan State University applicators must perform certain tasks prior to the pesticide application. They are described below.

### Pesticide Application Notification and REI Requirements in the field

#### Restricted Entry Interval (REI) Notification

- Applicators must post the “Grim-faced Man” warning signs to the exterior boundary of an application area to indicate that an area is under a Restricted Entry Interval (REI) *before* the pesticide application begins. These signs must be placed so that they are visible from all reasonably expected points of worker entry to the treated area. This must occur no longer than 24 hours prior to the application.

#### Multiple Pesticides Applied

- In cases where multiple pesticides are applied, the product with the longest REI must be followed.

#### Outdoor Production Areas

- If a pesticide is applied to an outdoor production area and the product labeling requires a REI of 4 hours or more, workers must be notified of the application by posting the “Grim-faced Man” warning signs.

#### Indoor Production Areas

- For indoor spaces, the applicator must post the “Grim-faced Man” warning sign on all doors leading to the treated area, clearly marking the space as under an REI.

#### Double Notification

- See page 21, “Notification Requirements – Double Notification.”

#### Pesticides Labeled with Skull and Crossbones

- If the pesticide being applied has the skull-and-crossbones symbol on its label, the applicator must notify a person at the facility. This individual must monitor the applicator at least every 2 hours during the application, either through visual checks or voice communication.



## During the Pesticide Application

To prevent or mitigate pesticide exposures, MSU and the applicator must ensure that no pesticide is applied so as to contact, directly or through drift, any worker or other person, other than an appropriately trained certified applicator assisting with the application. This is also a labeling requirement the pesticide applicator must comply with.

### Suspending pesticide applications - Application Exclusion Zone (AEZ)

#### Application Exclusion Zone (AEZ)

- The “Application Exclusion Zone” or AEZ is a zone or area surrounding pesticide application equipment that exists **only during** outdoor production pesticide applications.
- When applications of WPS-labeled pesticide products are in progress on their establishments, MSU must not allow or direct any worker or other persons to enter or to remain in the treated area or the AEZ that is within the boundaries of the establishment.
- After the application is complete, the AEZ no longer exists, and the treated area is subject to the REI specified on the pesticide product labeling and to the relevant WPS restrictions after applications.
- The requirement for MSU to keep persons out of the AEZ only applies within the boundaries of the establishment because the agricultural employer cannot be expected to control persons off the establishment.
- Applicators must suspend applications that apply beyond the establishment's boundaries because they control the pesticide application.

#### Suspension of the Application

- The applicator making a pesticide application must **temporarily suspend** the application if any worker or other person (other than an appropriately trained and equipped applicator involved with the application) is in the
  - AEZ for outdoor production applications, or
  - Area required to be free of workers or others during enclosed space production application.



Note: The following illustration is included to help clarify the preceding points.

*An applicator is applying pesticides at a field edge which is bordered by a road. A person is walking the road and observing the application, and it comes to the attention of the applicator the person may be within the AEZ boundary. MSU is not required to make efforts to keep this person out of the AEZ due to the person being off property and located in a right of way area. However, the applicator must suspend the application because the applicator has control over the application.*

## Measuring the application exclusion zone (AEZ)

### How to Measure

Measure the AEZ from the application equipment horizontally in all directions. The AEZ moves with the application equipment like a halo around the application equipment. Once the application is over, the AEZ does not exist.

### Size of the AEZ

- The AEZ must be a minimum of 100 feet when the pesticide is applied:
    - By air (fixed wing or helicopter),
    - By air blast sprayer,
    - As a spray using a spray quality smaller than medium (i.e., fine, very fine or extra fine), or
    - As a fumigant, smoke, mist, or fog.
  
  - The AEZ must be a minimum of 25 feet when the pesticide is:
    - NOT applied in a manner that would require a 100-foot AEZ, and
    - Sprayed from a height of greater than 12 inches from the planting medium (soil) using a spray quality of medium or larger (i.e., medium, coarse, very coarse, extra coarse and ultra-coarse).
  
  - No AEZ is required when the pesticide is applied in a manner other than those covered above (i.e., less than 12 inches from the soil with medium or larger spray quality)
-



## After the Pesticide Application

### Early-entry into active REI areas

#### Early Entry by a *Worker*

- Early-entry by a *worker* into a treated area on the agricultural establishment after a pesticide application is complete, but before any restricted entry interval for the pesticide has expired is **prohibited** at MSU agriculture-related establishments.

#### Early Entry by an Applicator

- Early-entry by an applicator into a treated area after a pesticide application is complete, but before any restricted entry interval for the pesticide has expired must utilize the label PPE before entry into the area.

#### Indoor/Enclosed Space Production

- The above requirements also apply to applications occurring in Indoor/Enclosed space production.

### Entry into Pesticide Treated Areas after the REI Expiration

#### Removal of Warning Signs

- The Applicator or a designated person with a commercial pesticide applicator certification at the facility must remove or fold shut the “Grim-faced Man” sign within 72 hours of the REI expiration.

Note: Indefinite display of the “Grim Faced Man” sign is prohibited.

#### Entry by a Worker

- Entry into a pesticide treated area after the REI expiration can only commence if the Grim-faced man sign has been removed by the applicator or designated person.

#### Entry by an Applicator

- Entry into a pesticide treated area after the REI expiration can only commence if the Grim-faced man sign has been removed by the applicator or designated person.



### **Indoor/Enclosed Space Production**

- Before a worker or other person can enter an indoor/enclosed space production area after the conclusion of the REI, there is a ventilation requirement that must be met in addition to the REI. The ventilation requirement can differ depending on the size of pesticide droplet, distance of the application mechanism and target, and type of greenhouse ventilation. To determine which ventilation requirement is applicable to a given situation, please use the chart on Attachment 1 “Entry Restrictions During Enclosed Space Production following Pesticide Applications

### **Notification of Application to Facility Staff**

- Applicators must record all the information detailed in the “Pesticide Application Information” section and post it to the central notification area within 24 hours of the conclusion of the pesticide application.



## Compliance Assurance

### Audits and Inspections

- All establishments are subject to annual WPS compliance inspections. These inspections may include an audit of pesticide application records, verification of the requirements outlined in this document, and interviews with support staff, lab technicians, or students to confirm compliance with all WPS regulations.

### Non-compliance and Violations

- Faculty, Support Staff, and Students who demonstrate a degree of willful noncompliance or negligence subject themselves to discipline consistent with MSU policies and procedures described in the MSU Support Staff Disciplinary Action Policy & Procedure. Depending on the degree of non-compliance, disciplinary measures include retraining all the way up to employment termination. To be considered a violation, the burden of proof must be met. The following are examples to illustrate the progression of discipline.

1st instance – Witness reports non-compliance to Operations and Compliance Manager. Noncompliance documented. Violator receives written notification of non-compliance. The violator’s supervisor informed. Facility access is suspended until appropriate WPS retraining is administered. Facility access is reinstated at the conclusion of re-training.

2nd instance – Witness reports non-compliance to Operations and Compliance Manager. Noncompliance documented. Written notification of non-compliance issued to violator. Investigation conducted. Access to the facility is suspended pending the investigation results. The appropriate department chair informed. Director of AgBioResearch informed. Potential disciplinary action issued at the discretion of AgBioResearch Director.

3rd instance – Witness reports non-compliance to Operations and Compliance Manager. Noncompliance documented. Written notification of non-compliance issued to violator. Investigation conducted. Access to the facility is suspended pending the investigation results. If investigation determines non-compliance, violator(s) will reported to MDARD and EPA. Violators may be responsible for any discipline levied by the regulatory authorities. Access/permissions to CANR establishments may be permanently revoke



# Attachments and Supporting Documents

## Attachment 1 - Entry Restrictions During Enclosed Space Production following Pesticide Applications

<p><b>Know Before You Go into a treated space</b></p> <p>Entry into restricted areas is prohibited to all personnel other than appropriately trained and equipped handlers.</p> <p><b>To determine when re-entry is allowed for all personnel:</b></p> <ol style="list-style-type: none"> <li><b>1. Identify application method and droplet size.</b> Fine droplets are 293 microns or smaller. Medium droplets are 294 microns or larger.</li> <li><b>2. Select the ventilation option.</b> One of the following criteria must be met: <ul style="list-style-type: none"> <li>▶ 10 air exchanges are complete (must be calculated)</li> <li>▶ 2 hours of mechanical ventilation (i.e. fans)</li> <li>▶ 4 hours of passive ventilation (i.e. open windows)</li> <li>▶ 11 hours of no ventilation followed by 1 hour of mechanical ventilation</li> <li>▶ 11 hours of no ventilation followed by 2 hours of passive ventilation</li> <li>▶ 24 hours of no ventilation</li> </ul> </li> <li><b>3. Know the Restricted Entry Interval.</b> Find the REI, if any, on the label.</li> <li><b>4. Determine the area(s) subject to restrictions.</b> Review area restrictions described in the next column on the right.</li> </ol> <p><small>Enclosed space production is production of an agricultural plant indoors or in a structure/space that is covered in whole or in part by any nonporous covering....</small></p>	<p><b>When using a fumigant</b></p> <p>The entire enclosed space and structures/areas that can't be sealed off are restricted until ventilation criteria is met or REI expires, whichever is longer. (See #2)</p>
	<p><b>When applying fine droplets that DO NOT require a respirator</b></p> <p>The entire enclosed space is restricted until ventilation criteria is met or the REI expires, whichever is longer. (See #2)</p> <p>If this is not possible, use larger droplets.</p>
	<p><b>When applying fine droplets that REQUIRE a respirator</b></p> <p>The entire enclosed space is restricted until ventilation criteria is met. (See #2)</p> <p>The treated area is restricted until ventilation criteria is met or REI expires, whichever is longer.</p>
	<p><b>When applying medium droplets or larger MORE THAN 12 inches away from growing media</b></p> <p>The treated area plus 25 feet in all directions within the enclosed space is restricted until the application is complete.</p> <p>The treated area is restricted until the REI expires. Ventilation is not required.</p>
	<p><b>When applying medium droplets or larger LESS THAN 12 inches away from growing media</b></p> <p>The treated area is restricted until the REI expires.</p> <p>Ventilation is not required.</p>

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## Attachment 2 – Relevant web links

1. EPA Regulation in 40 CFR Part 170 – Worker Protection Standard  
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-E/part-170>
2. EPA Worker Protection Standard “How to Comply” Manual  
<https://www.pesticideresources.org/migrated/wps/htc/htcmanual.pdf>
3. Worker Protection Standard “Quick Reference Guide”  
<https://www.pesticideresources.org/migrated/wps/hosted/quickrefguide.pdf>
4. Central Posting Area – Pesticide Safety Information Poster (Multiple Languages)  
<https://www.pesticideresources.org/wps-resources/updated-wps-posters-for-central-posting-areas-and-certain-decontamination-sites/>
5. Video – Worker Protection Standard (WPS) Pesticide Safety for Agricultural Workers  
<https://www.pesticideresources.org/wps-resources/worker-protection-standard-wps-for-agricultural-workers/>
6. Video – Worker Protection Standard (WPS) Pesticide Safety for Agricultural Handlers (and Crop Advisors)  
<https://www.pesticideresources.org/wps-resources/worker-protection-standard-wps-for-pesticide-handlers/>
7. Web-based Training for Trainers of Agricultural Workers and Pesticide Handlers  
<https://www.pesticideresources.org/wps-resources/web-based-training-for-trainers-of-agricultural-workers-and-pesticide-handlers/>
8. Enrolling in WPS Pesticide Safety for Agricultural Workers at Michigan State University  
<https://ehs.msu.edu/occ/wps/index.html>
9. WPS FAQ’s  
<https://www.epa.gov/sites/default/files/2016-04/documents/wps-faq.pdf>



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