



Public Education

Worker Protection Standard Pesticide Emphasis

The Student Workshop Manual



DCBS | Consumer and
Business Services



Oregon OSHA Public Education Mission:

We provide knowledge and tools to advance self-sufficiency in workplace safety and health

Consultative Services

- ♦ Offers no-cost on-site assistance to help Oregon employers recognize and correct safety and health problems

Enforcement

- ♦ Inspects places of employment for occupational safety and health rule violations and investigates complaints and accidents

Public Education

- ♦ Provides free training online, workshops, and training tools

Standards and Technical Resources

- ♦ Develops, interprets, and provides technical advice on safety and health standards
- ♦ Creates booklets, pamphlets, and other materials to assist in the implementation of safety and health rules

Field Offices

Portland: 503-229-5910

Salem: 503-378-3274

Eugene: 541-686-7562

Medford: 541-776-6030

Bend: 541-388-6066

Pendleton: 541-276-2353



Salem Central Office

Toll Free number in English: 800-922-2689

Toll Free number in Spanish: 800-843-8086

Website: www.osha.oregon.gov



This class is based on Oregon rules and may not be the same for all states. Consult with www.osha.gov or your state's OSHA entity for more information.

Attending an Oregon OSHA workshop or completing an online course may provide important information and guidance but may not meet all employer training requirements. The following materials should not be considered a substitute for any provisions of the Oregon Safe Employment Act or for any standards issued by Oregon OSHA.

It remains the employer's responsibility to ensure all training requirements are met, including any site-specific information.

For more information, contact Oregon OSHA at:

503-378-3272 (Main Office)
800-922-2689 (English—toll free)
800-843-8086 (Spanish—toll free)
ed.web@oregon.gov
www.osha.oregon.gov

Please Note: This material, or any other material used to inform employers of compliance requirements of Oregon OSHA standards through simplification of the regulations should not be considered a substitute for any provisions of the Oregon Safe Employment Act or for any standards issued by Oregon OSHA.



➤ Worker Protection Standard	
What to Expect from our Workshop.....	1
Quick Reference.....	3
Does the Worker Protection Standard apply to you?.....	5
Definitions.....	7
Required Postings & Records Retention.....	9
Pesticide Safety Training.....	10
What Records Must Include.....	12
Training Resource Materials.....	13
Training Exercise—Limited English Speaking Workers.....	14
Decontamination & Mitigation.....	15
Informing Workers.....	17
Emergency Assistance & Reporting.....	18
Application Restrictions	19
Application Exclusion Zone (AEZ).....	20
AEZ Distance Requirements	23
Application Notification	24
Personal Protective Equipment.....	26
AEZ Definitions.....	27
Label Requirements.....	31
Exercise—Which Rule Applies?.....	37
➤ Appendix — Reference Materials	39
A — Review—Parts of the Pesticide Label.....	40
B — Federal EPA Quick Reference Handout—Duties for All Employers.....	41
C — How to Comply with the Federal—EPA Link.....	43
D — Conditions for Early Entry.....	44
E — Pesticide Application Record Form—From Exercise.....	45
F — AEZ Decision Matrix	46
G— Droplet Size Classification	47
H—QR Codes for Reference Materials.....	48
I — Oregon OSHA Consultation Services.....	49



What to Expect From our Workshop

The purpose of this workshop is to provide an introduction to the Worker Protection Standard (WPS).

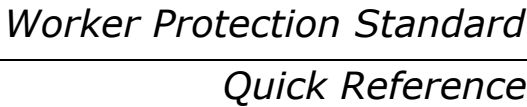
To get the most out of this workshop, please participate fully in all the activities. We hope you have fun and learn something of value.

Goals

At the end of this workshop you will be able to:

1. Identify the requirements of the WPS.
2. Differentiate between the Oregon OSHA and WPS rules.
3. Identify the components of an effective training team.
4. Identify the eight (8) label elements of the WPS.

This course will help you understand how the Worker Protection Standard rules have changed, and how to implement those changes in your workplace.





Worker Protection Standard

Special Note

Agricultural employers with 10 or fewer employees can earn an exemption from routine Oregon OSHA inspections if they meet ***all*** of the following criteria (from Oregon Revised Statute (ORS) 654.172 and Oregon Administrative Rule (OAR) 437-001-0057):

- No accidents resulting in death or serious physical injury have occurred within the preceding two-year period.
- The agricultural place of employment is inspected once every 4 years by an individual acting in a safety consultant capacity and the employer has corrected the violations noted by the consultant within 90 days of receipt of the consultant's report.
- The employer(s) and principal supervisor(s) have annually attended at least four hours of instruction on agricultural safety rules and procedures.

Please remember the above exemption does not apply to a field sanitation inspection; a labor camp inspection; an investigation of a fatality, catastrophe, or other reportable accident investigation; or a valid complaint inspection.

The Certificate confirms you attended four hours of safety instruction.

To inquire if the Oregon OSHA workshop or online class meets part of this exemption-related safety training requirement, call Oregon OSHA Public Education or the Oregon Department of Agriculture (ODA).

OSHA PubEd: 503-947-7443

ODA: 503-986-4600





Introduction to the Worker Protection Standard (WPS)

In Oregon, the Occupational Safety and Health Divisions (Oregon OSHA) administers and enforces occupational safety and health rules.

Oregon OSHA's activities include enforcement of the employee safety and health part of the U.S Environmental Protection Agency (EPA)'s pesticide Worker Protection Standard (WPS) as adopted in Division 4/ Agriculture at OAR 437-004-6000, -6001, -6401, -6405, -6406, -6501, -6502, -6508, and -6509. OAR 437-002-0170 and 437-007-0010 clarify that the WPS requirements also apply to certain Division 2/ general industry and Division 7/ forest activity employers.

In addition, Oregon OSHA enforces other safety and health rules related to the use of pesticides such as, hazard communication, and personal protective equipment including, respiratory protection, first aid including eyewashes, pesticide storage, and fumigation.

You can obtain a free copy of any of the applicable occupational safety and health rules by calling any of the telephone numbers listed below and requesting a copy of rules you want, either in hard copy, disc, or you can visit our website

www.osha.oregon.gov

For additional resources specific to pesticides and the WPS, you may also visit pesticideresources.org This site includes EPA-approved WPS training materials for both workers and handlers.





Does the Worker Protection Standard Apply to you?

YES, the requirements of the worker protection standard applies to you if:

- 1) Pesticides (the general term for herbicides, insecticides, fungicides, miticides, etc.) have been applied or a restricted entry interval (REI) has been in effect within the last 30 days at your establishment.
- 2) The pesticide applied has an "Agriculture Use Requirements" Box on the label (see example).
- 3) You employ **workers** to perform hand-labor on an agricultural establishment including any farm, forest operation, or nursery engaged in the outdoor or enclosed space production of agricultural plants, and/or pesticide handlers on an agricultural establishment including any farm, forest operation, or nursery engaged in the outdoor or enclosed space production of agricultural plants.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 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 (PPE), notification to workers, and restricted-entry interval.

The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Each 48-hr. REI is increased to 72 hours in outdoor areas where average rainfall is less than 25 inches per year.

Exception: If the product is soil-injected, or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: chemical-resistant protective suit, waterproof gloves, chemical resistant footwear plus socks, protective eyewear, and chemical-resistant headgear for overhead exposure.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

The Worker Protection Standard does not apply to fertilizer applications.

The 2015 WPS rule uses the term **greenhouse space** to refer to production of agricultural plants indoors or in a structure or space that is covered in whole or part by any nonporous covering and that is large enough to permit a person to enter. This typically includes greenhouses and hoop houses. We will use this term in the updated training materials.

For answers on how the WPS regulations apply directly to you and your business visit the PERC website and review this helpful handout:

<http://pesticideresources.org/wps/jfy/agemp/index.html>



Does the Worker Protection Standard Apply to you? *(Continued)*

NO, the worker protection standard does not apply to pesticides used in the following circumstances:

- For mosquito abatement, or similar wide-area public pest control programs sponsored by government agencies,
- On livestock or other animals,
- On plants grown for purposes other than for commercial or research purposes such as in habitations, and home fruit and vegetable gardens,
- On plants in ornamental gardens, parks, and public or private lawns and golf courses,
- By injection directly into agricultural plants (Direct injection does not include "hack and squirt," chemigation, soil incorporation, or soil-injection),
- For vegetation control in rights-of-way, pastures and rangeland, and other non-crop areas,
- As attractants or repellents in traps, or
- On the harvested portions of agricultural plants or on harvested timber.





Definitions

Workers

A worker is anyone who is:

1. Employed (including self-employed) in exchange for a salary, wages, or other compensation, **and**
2. Doing tasks directly related to the production of agricultural plants on an agricultural establishment such as, cultivating, weeding, pruning, watering, or harvesting.

Handlers

A handler is anyone who is:

1. Employed (including self-employment) in exchange for a salary, wages, or other compensation by an agricultural establishment or a commercial pesticide handling establishment that uses pesticides in the production of agricultural plants, **and**
2. Doing **any** of the following tasks:
 - Mixing, loading, transferring, applying, or disposing of pesticides;
 - Handling opened containers of pesticides; emptying, triple-rinsing, or cleaning pesticide containers according to labeling instructions; or disposing of pesticide containers that have not been cleaned;
 - Acting as a flagger during an application;
 - Cleaning, adjusting, handling, or repairing the parts of application related equipment that may contain pesticide residues;
 - Assisting with the application of pesticides, including incorporating the pesticide into the soil after the application has occurred, or dipping plant cuttings in rooting hormones if they registered pesticides;
 - Entering a treated area outdoors after an application or during a soil fumigant;
 - Entering a greenhouse or other enclosed space after application and before the inhalation exposure level or any ventilation criteria established by WPS been met to:
 - Operate ventilation equipment,
 - Adjust or remove coverings, such as tarps used in fumigation, or
 - Checks pesticide concentration levels in the air.



Definitions *(continued)*

Handlers continued:

- Performing tasks as a crop advisor:
 - During a covered pesticide application,
 - During any restricted-entry interval, or
 - Before any inhalation exposure level or any ventilation criteria on the pesticide product labeling has been met.

Examples:

You **are a handler** if you are loading unopened water-soluble packets into a mixing tank (because you are mixing and loading the pesticide).

You **are not a handler** if you:

- Purchase pesticides and transport them unopened to an establishment.
- Carry containers that have never been opened into a pesticide storage facility.
- Transport containers that have never been opened to the site where they are to be mixed, loaded, or applied.

NOTE: Safe practices must still be exercised during these non-handling activities.

Handlers who are currently certified as applicators of restricted-use pesticide must be given all of the WPS handler protections, but are not required to receive the full WPS handler training; however, they must be aware of their rights and responsibilities under the WPS.

For more definitions specific to WPS, visit the PERC webpage:

<http://pesticideresources.org//wps/definitions/index.html>



Informing Employees—Required Postings and Record Retention

An agricultural employer must display or make certain information is available on the establishment specific to pesticide safety, application, and hazard information. This means the agricultural employer must:

1. Display or make available all of the information listed below in an easily accessible (central) location on the agricultural establishment.
2. This information includes:
 - The updated EPA WPS safety poster, or equivalent information, with current emergency contact information.
 - Application records which include:
 - Product name, EPA registration number, and active ingredient(s),
 - Crop or site treated location and description of the treated area, and
 - Date, start, and end times of the application, and duration of restricted entry interval (REI).
 - A copy of the safety data sheet (SDS) for the formulated product for each WPS-labeled pesticide applied during the current crop cycle.
3. In addition, display the EPA WPS safety poster (or equivalent) where decontamination supplies are located at permanent sites and where decontamination supplies are provided for 11 or more workers.
4. Allow workers and handlers unrestricted access to all of the information and keep all of the displayed information current and legible.
5. Display the EPA WPS safety poster or equivalent information before an application takes place and for a minimum of 30 days after the REI expires.
6. Provide the SDS and application information within 24 hours of the application and before workers enter treated areas. This information must be provided for a minimum of 30 days after the REI expires (Oregon OSHA considers SDSs to be exposure records and has additional requirements for the retention of these records - See OAR 437-004-0005 and 1910.1020 for more information).
 - Provide the SDS and application information upon request by a worker, handler, designated representative, or medical personnel within 15 days.



Protection for both workers and handlers—a Q&A

Pesticide Safety Training

Employers must ensure **workers are trained before** performing tasks in a pesticide treated area (REI in effect within the last 30 days). Employers must also ensure **handlers are trained before** performing any handler activity.

There is no grace period for worker or handler training.

Question: When must workers and handlers be trained?

Answer: Before engaging in any pesticide related tasks.

Question: How often must workers and handlers be trained?

Answer: You must train workers and handlers annually.

Question: How do I train my workers and handlers?

Answer: Present training using EPA-approved materials either orally from written materials or with a video. Check the EPA website to ensure your training materials are up-to-date. Here is the website to the EPA WPS training materials page:

<https://www.epa.gov/pesticide-worker-safety/safety-information-related-worker-protection-standard>

Question: Who can provide the training?

Answer: Trainers must be certified applicators or have completed an EPA-approved train-the-trainer program or be designated by the State or Tribal pesticide enforcement agency.

Document Title	EPA Number
WPS Pesticide Safety Information	
Protect Yourself from Pesticides: Guide for Agricultural Workers (English/Chinese-Mandarin)	EPA 305-B-06-004
Protect Yourself from Pesticides: Guide for Agricultural Workers (English/Filipino-Tagalog)	EPA 305-B-06-006
Protect Yourself from Pesticides: Guide for Agricultural Workers (English/Haitian Creole)	EPA 305-B-06-007
Protect Yourself from Pesticides: Guide for Agricultural Workers (English/Hmong)	EPA 305-B-06-009

Question: What about employees who speak a different language?

Answer: The training must be delivered in a manner the employees can understand, and the trainer must be present and respond to questions. There are resources available in different languages on the EPA website noted above.



Protection for both workers and handlers *(continued)*

Question: How long do I need to keep the training documentation?

Answer: Records must be maintained on the establishment for two years from the training date for each worker and handler required to be trained on the agricultural establishment.

Question: Where should I train my employees?

Answer: The training must be held in a location where workers and handlers can focus on the information being presented. This means somewhere they can hear the information being presented, without noise from traffic or loud machinery. This also means the environment must be conducive to learning without environmental distractions such as extreme heat, cold or exposure to the elements.

Separate from the pesticide safety training, employers must tell workers and handlers where to find the required safety postings (see required postings section).



Remember, handlers and certified applicators must also be given the full Hazard Communication training required in OAR 437-004-9800.

Workers and handlers must complete training before they begin working.



What must training records include?

WPS training records for each worker and handler must be kept on the establishment for 2 years from the date of the training. The training record must include:

- The worker's or handler's printed name and signature,
- The date of the training,
- Trainers name,
- Evidence of the trainer's qualification to train,
- Employers name, and
- Information to identify which EPA approved training materials were used for the training (the EPA document number or EPA approval number for the materials).



An attendance roster of the WPS training with all of the training record information meets the recordkeeping requirements.

If a worker or handler was trained at another establishment, you may get a copy of the training record and keep it as your record of training. If no record is provided, you must provide WPS training and maintain the training record.

WPS Trainers are **not** required to provide each person trained with a copy of the training record. However, they must provide the record if the trained employee requests it. Individual training record forms or other methods of maintaining the required training information may be developed and used to meet this requirement.

Pesticide Safety Training			
Training Class Roster—			
Worker Protection Standard Agricultural Safety Pesticide Training Record Log			
Type of Training: <input type="checkbox"/> Handler <input type="checkbox"/> Worker	Language: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other		
Name of Trainee's Company or Employer:	Training Location:	Trainer Name:	
	Address:	Trainer Phone:	
	City:	Cert. Expiration:	
Date of Training:	State:	Zip:	County:
	Date Training Cards Were Issued:		Date of Training Card Expiration:
No.	Trainee's Name (Please Print)	Trainee's Signature	
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

Please keep copies of training rosters for a minimum of two years after the completion date.
The undersigned hereby verifies that all requirements have been met pursuant to A.A.C. R-3-3-1003. I understand providing false information in the State of Oregon is a crime.

Trainer's Signature _____ Date _____



Training Resources and Materials

Training materials used for WPS training must be EPA approved.

Here are some resources you can turn to for safety and health training materials specific to WPS, hazard communication, and safety and health:



Contact OSHA Resource Center at:

Phone: 503-378-3272
1-800-922-2689

Address: 350 Winter St. NE
Salem, OR 97301

<http://osha.oregon.gov>



Environmental Protection Agency
(EPA)

Phone: 1-888-663-2155

<https://www.epa.gov/>



PERC Pesticide Educational
Resources Collaborative

Pesticide Educational Resources
Collaborative (PERC)

<http://pesticideresources.org/>

Oregon OSHA Agricultural Division 4 rules are available for free from OR OSHA.

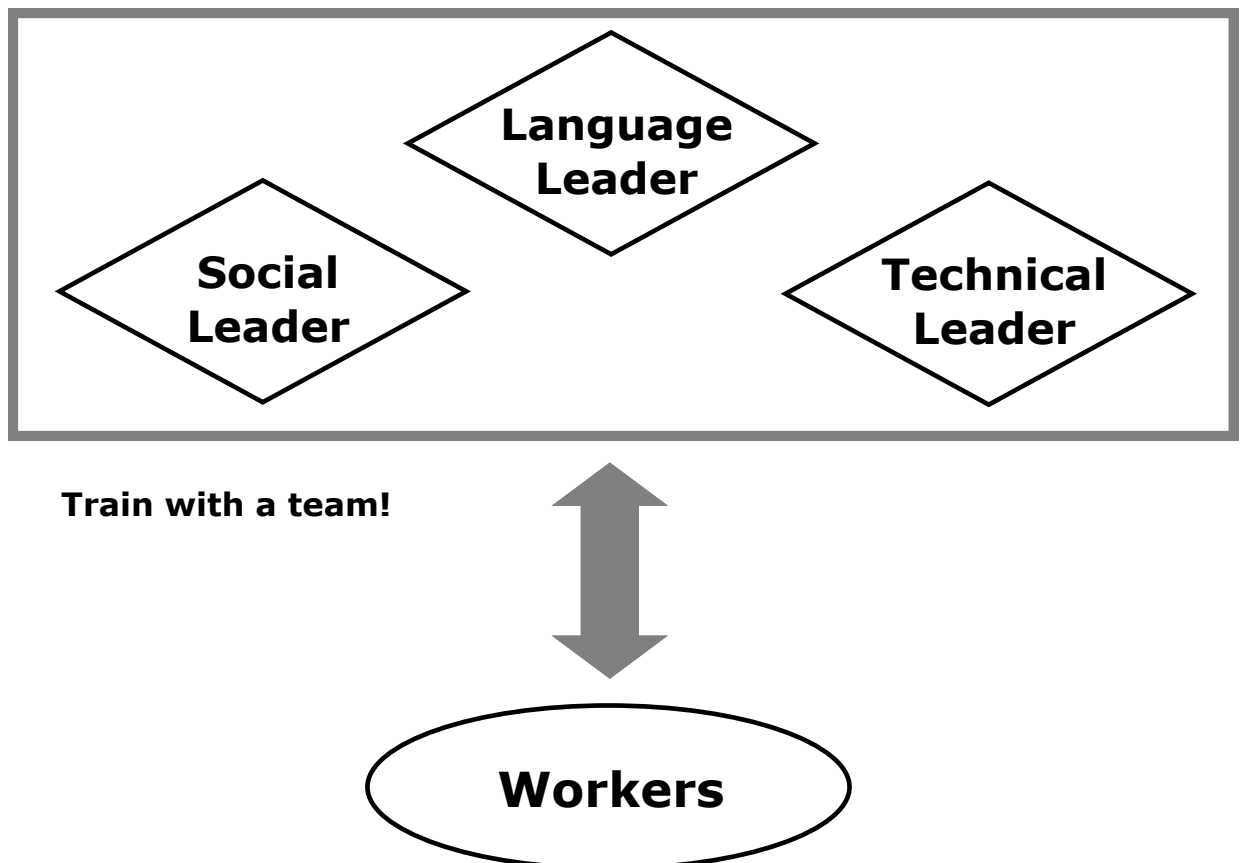


Training Exercise—Limited English Speaking Workers

Language Leader: The Spanish - or other non-English-speaking person with the best English communication skills.

Social Leader: The person the group sees as their leader; the person they trust the most.

Technical Leader: The person with the best job and safety related knowledge and skills.





Decontamination Supplies

Employers must establish accessible decontamination supplies located together within 1/4 mile of all workers when required (*see ORS 170-411*) and for handlers (*see ORS 170.411 and 170.509*) at the mix site. This includes:

- Employers must provide 1 gallon of water per worker and 3 gallons of water per handler for full body wash at the beginning of each work period for routine and emergency decontamination.
- Plenty of soap and single-use towels. Hand sanitizers and wet towelettes **do not** meet this requirement.
- A clean coverall (or other clean change of clothes) for handlers.

Employers must provide water that is safe and cool enough for washing, eye-flushing, and drinking. Do not use water that is also used for mixing pesticides unless steps are taken to ensure the safety of the worker.

Handlers must be provided with decontamination supplies where PPE is removed at the end of a task.

Do not put worker decontamination sites in areas being treated or currently under an REI. If the decontamination supplies must be in the treated area for handlers because of travel distance, place the supplies in a closed container that is washable.

Provide handlers with decontamination supplies at each mixing and loading site.

When pesticides carry a "DANGER" or "DANGER POISON" signal word, employers must also provide emergency eyewash where pesticides are mixed. Eyewash must be capable of providing a 15 minute continuous flow, with hands-free operation, and able to flush both eyes at the same time.



Employer Information Exchange

Before any application, commercial pesticide handler employers must make sure the owner/operator of an agricultural establishment where a pesticide will be applied, is aware of:

- The location and description of the area to be treated,
- The date of the application, estimated start time, and estimated end time of the application,
- The product name, EPA registration number, active ingredients, and REI,
- Whether the product label requires both oral warnings and treated area posting, and
- All other safety requirements on labeling for workers or other people.



Employers (owners/operators of an agricultural establishment) must pass this information along to their employees and also make sure any commercial pesticide handler employer they hire is aware of:

- Specific location and description of any treated areas at their workplace where an REI is in effect that the commercial handler may be in or walk within 1/4 mile of, and
- Restrictions on entering those areas.

The commercial pesticide employer must pass this information along to the handler they employ to do the work.

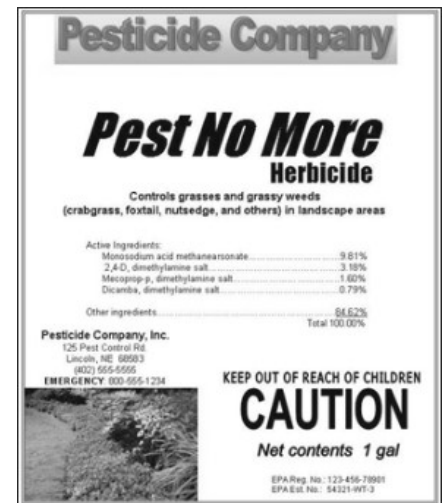


Emergency Assistance—Protection for Workers and Handlers

What do you do if you suspect an employee has been exposed to pesticides?

If there is reason to believe a worker or handler has been exposed to pesticides, during or within the previous 72 hours of their employment at your worksite, and may need emergency medical treatment, employers must do the following:

1. Promptly make transportation available to an appropriate emergency treatment facility.
2. Promptly provide information related to each pesticide product to which the person may have been exposed to the treating medical personnel. This information includes:
 - Safety Data Sheets (SDS),
 - Product name,
 - EPA registration number,
 - Active ingredients,
 - All first aid and medical information from the label,
 - Description of how the pesticide was used on the agricultural establishment, and
 - The circumstances that could have resulted in exposure to the pesticide.



Labels and SDSs on the Internet

A few example of these websites include:

Crop Data Management: www.cdms.net/manuf/manuf.asp

Agrian: www.agrian.com/labelcenter/results.cfm

PICOL: <http://picol.cahe.wsu.edu/LabelTolerance.html>

NPIC: <http://npic.orst.edu/ingred/products.html>



Reporting safety and health issues to Oregon OSHA

If any workplace accident results in a serious injury or a fatality, you are required to report it to Oregon OSHA. The reporting timelines are as follows:

- ♦ Fatality*: 8 hours
- ♦ Catastrophe**: 8 hours
- ♦ All in-patient hospitalizations: 24 hours
- ♦ Amputations and avulsions that include bone or cartilage loss, and the loss of an eye: 24 hours

* Fatalities and some serious injuries are investigated by Oregon OSHA.

When does the clock start? As soon as the employer knows one or more of the above conditions have occurred. Do not wait to report, call 24 hours a day, 7 days a week.

** A catastrophe consists of 2 or more fatalities or 3 or more employees hospitalized from the same event.

Take our [online class](https://osha.oregon.gov/edu/courses/Pages/recordkeeping-and-reporting-online-course.aspx) to better understand reporting rules in Oregon.

<https://osha.oregon.gov/edu/courses/Pages/recordkeeping-and-reporting-online-course.aspx>

Call your OSHA Field Office to report:

Portland: 503-229-5910

Salem: 503-378-3274

Eugene: 541-686-7562

Medford: 541-776-6030

Bend: 541-388-6066

Pendleton: 541-276-2353



Salem Central Office:

Call these 24/7 toll free numbers:

English: 800-922-2689

Spanish: 800-843-8086

Web site: www.osha.oregon.gov



Restrictions During Application—Protecting workers

These restrictions apply to agricultural employers who employ workers.

Restrictions during application:

During pesticide applications, keep workers and everyone other than correctly trained and equipped handlers out of the treated area (for all types of applications) and out of:

- The application exclusion zone (AEZ) for outdoor production, or
- A specific area that varies by the type of application until the ventilation criteria are met for enclosed space production.

Restricted Entry Intervals (REIs)

Do not direct or allow any worker to enter or remain in the treated area until the REI has expired and all posted warning signs are removed or covered:

- Always orally warn workers and post treated areas if its required by the pesticide label.
- If the label is silent on notification, either orally warn workers or post entrances to treated areas.
- Post all enclosed space (greenhouse) applications on the entrance of the space if the REI is great than 4 hours.
- Tell workers which method is in effect.





Application Exclusion Zone (AEZ)

What is the Application Exclusion Zone (AEZ)?

The AEZ means the area surrounding the application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications. Workers are required to be informed of all pesticide applications that will be made within 1/4 mile of where they will be working or passing by on foot.



The handler performing the application must immediately suspend a pesticide application if any worker or other person, other than an appropriately trained and equipped handler involved in the application, is in the AEZ.

Does the AEZ effect how I train my workers and handlers?

Yes, you must train your workers to be aware of restricted-entry interval and application exclusion zones.

Does the AEZ change how I communicate with workers?

You must plan where you will have your workers in relation to where you need to spray to avoid having workers within the AEZ.



Application Exclusion Zone (AEZ) (Continued)

Does this apply to YOU?

Do you have Agricultural labor housing (ALH) or work related structures that would fall within the Application Exclusion Zone? If YES, then it applies. If no, it doesn't. Some items only apply to ALH.

The agricultural employer must ensure that **prior** to pesticide application, any enclosed agriculture structures (labor housing or work-related structures) that are located within the AEZ and that are used at any time by employees and other occupants must have all of the following:

- A) All doors and windows closed,
- B) Any air in-take devices or mechanisms turned off,
- C) Provisions to protect or store personal or household items that are not located in an enclosed agricultural structure from potential contamination, and
- D) A closeable storage area for shoes/boots to prevent tracking of pesticide into the structures where people live or reside.

Employers must provide the following information in a manner that is easy to understand and effectively conveys the information needed prior to the pesticide application, to occupants of an enclosed agricultural structure in the AEZ:

- A) Instructions on closing windows and doors to minimize exposure to outside air regardless of whether they are staying inside the enclosed agricultural structure or evacuating during nearby pesticide applications,
- B) Instructions on how to close potential air-intakes and any other measures to minimize exposure to outside air during nearby pesticide applications,
- C) The start and stop times for remaining inside the enclosed agricultural structures and how to determine when the application equipment is in range,
- D) Instructions as to whether people can, as appropriate, evacuate or stay in an enclosed agricultural structure, how to maintain protective measures, and how long they must remain outside the AEZ,
- E) Instructions on how to protect personal or household items in the AEZ from potential contamination, and
- F) Instructions on how to report pesticide residue or deposit on enclosed agricultural structures, personal, or household items in AEZ.



Agricultural Employer Requirements

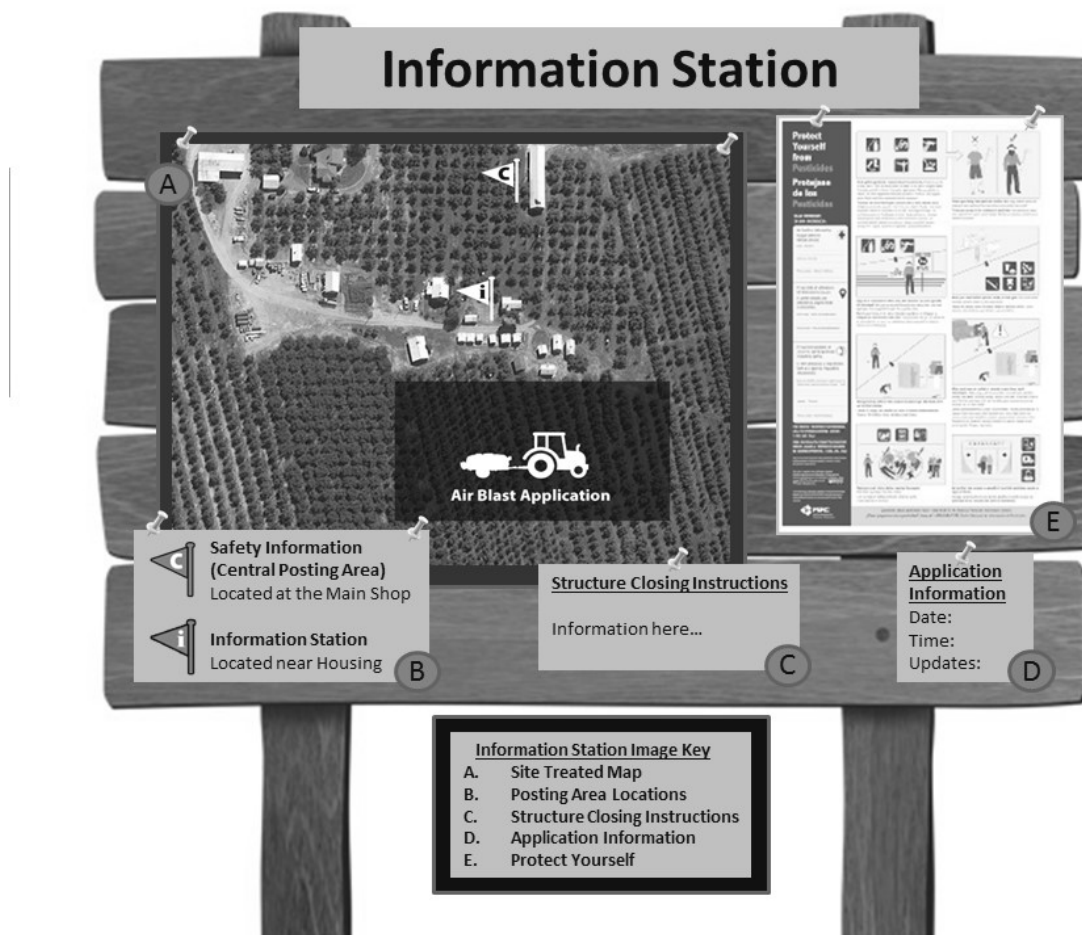
Employer Requirements—

Oregon Specific Worker Protection Standard

⇒ ALH ONLY

Employers must provide information and ensure that all adult occupants of agriculture labor housing within the AEZ have access to:

- A) An information station located in close proximity to agriculture labor housing that contains information on pending applications, with a means of alerting occupants to changing information,
- B) Information on how to prevent and reduce pesticide exposure, and
- C) Information about the location of the pesticide safety information required by section 170.311(a). If anyone other than a trained and protected handler exits and enclosed agricultural structure and enters the AEZ the handler must suspend the pesticide application per section 170.505(b).





Distance Requirements

The AEZ is the zone around the application equipment when applied aurally or through a air blast sprayer and varies depending on if the handler is required to wear a respirator during the application. The AEZ is designed to offer an extra margin of safety and lasts 15 minutes after the equipment moves past.

Respiratory Protection:

- Required \Rightarrow AEZ=150 feet
- **NOT** Required \Rightarrow AEZ=100 feet

What are the AEZ Requirements for the following examples?

Scenario: The applicator is using a air blast sprayer, with a small spray quality, and a respirator.

Solution: AEZ=150

Scenario: The label does not require a respirator, and is being applied an air blast sprayer.

Solution: AEZ=100 feet

Scenario: Using a boom sprayer greater than 12 inches above the planting medium.

Solution: AEZ=25 feet

Scenario: Spot spraying with a back pack sprayer.

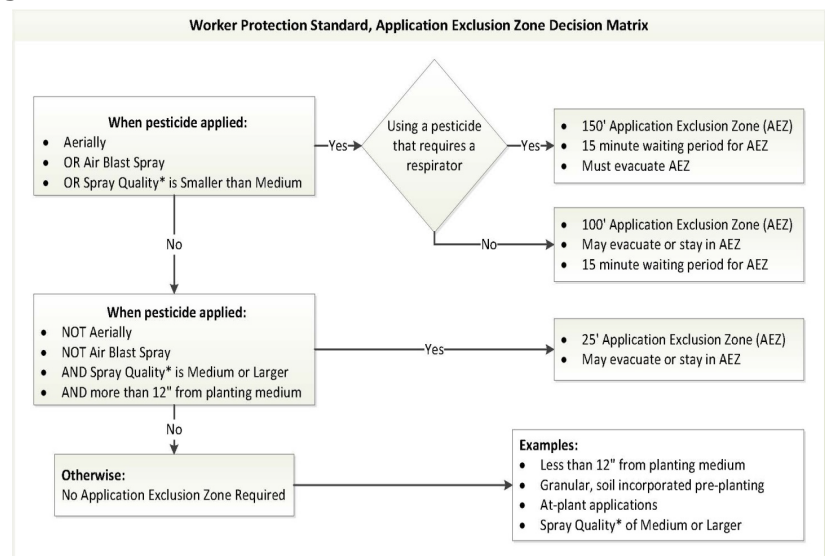
Solution: AEZ=25 feet, or AEZ=0 feet

Scenario: Dipping cuttings in rooting hormone.

Solution: AEZ=0 feet

Utilize the Application Exclusion Zone Decision Matrix for additional information (see page 4):

<https://osha.oregon.gov/OSHArules/adopted/2018/ao2-2018-ltr-WPS-AEZ.pdf>





Application Notification—Additional Protection for Workers

What do I need to do to notify my workers about a pesticide application?

You must orally warn workers and post the treated areas if required by the pesticide labeling.

Unless the pesticide label specifies otherwise, post warning signs if the REI is greater than:

- 48 hours for outdoor production, or
- 4 hours for enclosed space production (greenhouses).

For all other applications, either orally warn workers or post warning signs.



When two or more pesticides are applied to a treated area at the same time, the REI posted is the longest one of all used pesticides.

What does an oral warning mean?

Before each application, tell workers who are on the establishment (in a manner they can understand):

- The location and description of the treated area and the AEZ,
- The date and times entry is restricted, and
- AEZ, REI, and not to enter during the REI.

Workers who enter the establishment after the application starts must receive the same warning at the start of their work period.

Once the REI is over you must remove or cover all no-entry warning signs before allowing workers into the impacted area.

What about warning the public about restricted entry?

The agricultural employers responsibilities with respect to the REI focused on keeping workers out of the treated area. Handlers must follow the pesticide label that tells them not to allow entry into the treated area until sprays have dried and not to apply the product in a way that will contact workers or other persons, either directly or through drift. The label is the law.



Additional Protection for Handlers - Application Restrictions and Monitoring

- Do not allow handlers to apply a pesticide so as to contact, directly or through drift, anyone other than properly trained and PPE-equipped handlers.
- Handlers must suspend applications when anyone other than appropriately trained and equipped handlers enter the AEZ.
- Make sight or voice contact at least every 2 hours with anyone handling pesticides labeled with a skull and crossbones.
- Make sure a trained handler equipped with labeling-specific PPE maintains constant voice or visual contact with any handler in an enclosed space who is doing fumigant related tasks, such as application or monitoring air levels.



Specific instructions for handlers:

- Before handlers do any handling tasks (mix, load, apply, etc.), inform them in a manner they can understand, of all pesticide labeling instructions for safe use.
- Keep pesticide labeling accessible to each handler during entire handling task.

Additional Protection for Handlers—Equipment

Equipment Safety for Handlers:

- Inspect pesticide handling equipment before each use, and repair or replace as needed.
- Allow only appropriately trained and equipped handlers to repair, clean, or adjust pesticide equipment that contains pesticides or pesticide residues.

Personal Protective Equipment (PPE)

You must provide handlers with the PPE the pesticide labeling requires for the task, and be sure it is:

- Clean and in operating condition,
- Worn and used correctly,
- Inspected before each day of use, and
- Repaired or replaced as needed.



When a respirator is required by the product labeling, provide handlers with:

- A medical evaluation to ensure the handler is physically able to wear the respirator,
- Train in respirator use, and
- A fit test to ensure the respirator fits correctly.

Keep records on the establishment of these items for two years.

Remember to take steps to avoid heat related illness when labeling requires the use of PPE for a handler activity.



Definitions for the Application Exclusion Zone (AEZ)

- **Application Exclusion Zone (AEZ):**

The AEZ means the area surrounding the application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications.

The handler performing the application must immediately suspend a pesticide application if any worker or other person, other than an appropriately trained and equipped handler involved in the application, is in the AEZ.

- **Treated area:**

The area to which a pesticide is being directed and/or deposited during an application. After the application is complete, the treated area is subject to the labeling-specified restricted-entry interval (REI) and the post-application entry restrictions specified in Sec. 170.407 of the Worker Protection Standard (WPS).

- **Enclosed agricultural structure:**

A fully-enclosed space (has walls, ceilings, and floors that minimize the entry of outside air when doors, windows, and mechanical air intakes are closed) with an interior area that shelters occupants from dermal exposure to pesticide spray drift.

- **Spray quality** (as defined by the [American Society of Agricultural and Biological Engineers Standard S-572.1](#) see appendix page 70).

Considers several factors including the nozzle design, system pressure, and speed of the application equipment. The eight spray quality categories are referenced in nozzle charts:

Category: Spray Quality	Symbol	Color Code
Extremely Fine	XF	Purple
Very Fine	VF	Red
Fine	F	Orange
Medium	M	Yellow
Coarse	C	Blue
Very Coarse	VC	Green
Extremely Coarse	XC	White
Ultra Coarse	UC	Black

<http://sprayers101.com/whats-my-spray-quality-in-3-simple-steps/>



WPS Glove Requirements for Workers, Handlers, and Pilots

- All agricultural pesticide handlers and early-entry workers covered by the Worker Protection Standard are now permitted to wear separate glove liners beneath chemical resistant gloves.
- Agricultural pilots do not have to wear chemical resistant gloves when entering or exiting aircraft.
- Handlers and early entry workers may choose whether to wear the liners.
- The liners may not be longer than the chemical resistant glove, and they may not extend outside the glove.
- The liners must be disposed of after 10 hours of use, or whenever the liners become contaminated.
- Lined or flocked gloves, where the lining is attached to the inside of the chemical resistant outer glove, remain unacceptable.
- Regulatory action was taken to reduce the discomfort of unlined chemical resistant gloves, especially during hot or cold periods.

Additional protection for handlers

You must provide handlers a clean area for:

- Storing personal clothing not in use,
- Putting on PPE at the start of a task, and
- Taking off PPE at the end of a task.

Do not allow used PPE to be worn home or taken home.



Care of PPE

You must ensure PPE is properly cared for, this includes:

- Store and wash used PPE separately from other clothing and laundry.
- If PPE will be reused, clean it before each day of reuse, according to the instructions for the PPE manufacturer unless the pesticide labeling specifies other requirements. If there are no other instructions, wash in detergent and hot water.
- Dry the clean PPE before storing, or hang to dry.
- Store clean PPE away from other clothing and away from pesticide areas.
- Store respirators in clean sealable plastic bags or plastic totes.
- Store used respirator cartridges in a zip lock plastic bag separate from the respirator.

Replacing respirator purifying elements, Replace particulate filters:

- When breathing becomes difficult, or
- When filter is damaged or torn.

Replace vapor-removing cartridges/canisters when any of the following conditions are met:

- When odor/taste/irritation is noticed,
- When breathing resistance becomes excessive,
- When the respirator label or pesticide label requires it (whichever is shorter), or
- After 8 total hours of use, in the absence of any other instructions or indications of service life.





Care of PPE (*Continued*)

Disposal of PPE

- Discard, **do not clean**, coveralls and other absorbent materials that are heavily contaminated with pesticide having a signal word “DANGER” or “WARNING.” When discarding PPE, ensure that it is rendered unusable as apparel or burned or otherwise made unavailable for further use.
- Follow federal, state, and local laws when disposing of PPE that cannot be cleaned correctly.

Instructions for people who clean PPE

Inform people who clean or launder your PPE:

- That materials may be contaminated with pesticides,
- The potentially harmful effects of exposure to pesticides,
- How to protect themselves when handling PPE,
- How to clean PPE correctly, and
- Decontamination procedures to follow after handling contaminated PPE.



Additional Agricultural Employer Duties:



Before allowing persons not directly employed by the establishment, such as an off site mechanic, to clean, repair, or adjust pesticide application equipment, provide the following information:

1. That the equipment may be contaminated with pesticides.
2. The potentially harmful effects of pesticide exposure.
3. How to handle equipment to limit exposure to pesticides.
4. How to wash themselves and/or their clothes to remove and prevent exposure to pesticide residues. *Reference ORS 170.309 and 170.313(1)*



8 Items to Notice on Labels Covered by WPS

1. Application Restriction Statement

"Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application."

Label location—DIRECTIONS FOR USE

2. 40 CFR Part 170 Reference Statement

"Use this product only in accordance with it's labeling and with the Worker Protection Standard, 40 CFR part 170."

Label location—AGRICULTURAL USE REQUIREMENTS

3. Product-Type Identification Statement

N-menthyl carbamates, organophosphates, and fumigants must be identified as such.

Label location—Either near the product name, product type identification or in the STATEMENT OF PRACTICAL TREATMENT or FIRST AID TREATMENT fumigants must be identified as part of, or close to, the product name.

4. State Restrictions

"For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation."

Label location—DIRECTIONS FOR USE

5. Spanish Warning Statement

If the product is classified as Tox I (Danger) or Tox II (Warning), the signal word shall appear in Spanish and English followed by the statement, "Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle." (If you don't understand the label, find someone to explain it to you in detail). DANGER = PELIGRO WARNING = AVISO

Label location—Close to the product name



8 Items to Notice on Labels Covered by WPS *(Continued)*

6. Restricted Entry Statement

"Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI)." If only one REI, it must be listed after the above statement in the Agriculture use box. If more than one REI for different crops, the REI will be associated with the directions for use for each crop and identified as such (example, 24 hour REI). Most ranges are 4-72 hours.

Label location—AGRICULTURAL USE REQUIREMENTS

7. Notification-To-Workers Statement

Toxicity I, for acute dermal toxicity or skin irritation shall state "Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas." For fumigants used in green houses shall state "For greenhouse application" by warning them orally and by posting warning signs outside all entrances to the greenhouse.

For any pesticide other than those for which the labeling requires both posting and oral notification of applications and the label is silent on notification, the agricultural employer shall give notice of the application to the worker either by the posting of warning signs or orally. The workers shall be informed which method of notification is in effect.

Label location—AGRICULTURAL USE REQUIREMENTS

8. Personal Protective Equipment Statement

These requirements are for all handlers of the product for all uses unless the exceptions are clearly identified and are located in two locations on the label.

Label Location—

- 1) PPE for handlers will be in HAZARDS TO HUMANS AND DOMESTIC ANIMALS.
- 2) PPE for early entry workers will be placed in the AGRICULTURAL USE REQUIREMENTS and immediately after the REI statement.



RESTRICTED USE PESTICIDE

Due to acute oral, dermal and inhalation toxicity and avian hazards.
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Phorate® 20G

20% Granular Systemic Low-Odor Insecticide

ACTIVE INGREDIENT

Phorate (O,O-diethyl -S-[(ethylthio)methyl]- phosphorodithioate)..... 20.0%

INERT INGREDIENTS 80.0%

TOTAL 100.0%

**LABEL
MODIFIED FOR
TRAINING
PURPOSES**

**STOP--READ LABEL BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

5

DANGER



POISON

PELIGRO

VENENO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

3

**STATEMENT OF PRACTICAL TREATMENT
ORGANOPHOSPHATE**

FIRST AID TREATMENT: Call a doctor (physician), clinic, or hospital immediately. Explain that the victim has been exposed to Phorate and describe his condition.

IF BREATHING HAS STOPPED, start artificial respiration immediately and maintain until doctor sees victim.

IF SWALLOWED, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available, by administering syrup of ipecac. **DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

IN CASE OF CONTACT, immediately flush eyes or skin with plenty of water for at least 15 minutes. See doctor immediately.

Read Additional PRECAUTIONARY STATEMENTS.

EPA Reg. No. 9779-293
Manufactured For
Terra International, Inc.
P.O. Box 6000, Sioux City, Iowa 51102-6000
Riverside® Serves Agriculture. Agriculture Serves Everyone.

EPA Est. No. 34704-NE-1

NET CONTENTS
LBS.
9/A07/B

This material is for training use only.

Phorate® 20G

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

CAN KILL IF SWALLOWED

This product can kill you if swallowed, even in small amounts:
spray mist may be fatal if swallowed



CAN KILL BY SKIN CONTACT

This product can kill you if touched by hands or spilled or splashed on skin, in eyes or on clothing (liquid goes through clothes).



CAN KILL IF BREATHED

This product can kill you if vapors or spray mist are breathed.



WORK SAFETY RULES

REPEATED EXPOSURES TO CHOLINESTERASE INHIBITORS SUCH AS ARE CONTAINED IN THIS PRODUCT MAY, WITHOUT WARNING, CAUSE PROLONGED SUSCEPTIBILITY TO VERY SMALL DOSES OF ANY CHOLINESTERASE INHIBITOR.

Persons working with this product should have frequent blood tests of their cholinesterase levels. If the cholinesterase level falls below a critical point, no further exposure should be allowed until it has been determined by means of blood tests that the cholinesterase level has returned to normal. Before using this product, consult the National Pesticide Telecommunications Network for recommendations regarding such blood tests, poisoning management, emergency treatment, and other information regarding the toxicity of Phorate. The toll free number for the National Pesticide Telecommunications Network is 1-800-858-7378. If handled indoors provide mechanical exhaust ventilation.

Do not rub eyes or mouth with hands. If you feel sick in any way, STOP work and get help right away. See First Aid (Practical Treatment) section.

POISON SIGNS (Symptoms) Phorate is a very dangerous poison. It rapidly enters the body on contact with all skin surfaces and eyes. Exposed persons must receive prompt medical treatment or they may die. Some of the signs and symptoms of poisoning are headache, nausea, vomiting, cramps, weakness, blurred vision, pin-point pupils, tightness in chest, labored breathing, nervousness, sweating, watering, of eyes, drooling or frothing of mouth and nose, muscle spasms and coma.



Phorate® 20G

NOTE TO PHYSICIAN: Antidote - administer atropine sulfate in large doses. TWO to FOUR mg. intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. 2-PAM chloride is also antidotal and may be administered in conjunction with atropine. DO NOT GIVE MORPHINE OR TRANQUILIZERS. Phorate is a strong cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of the poison may occur and fatal relapses have been reported after initial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.

Engineering Controls Statement:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

DURING AERIAL APPLICATION, HUMAN FLAGGERS ARE PROHIBITED UNLESS IN A TOTALLY ENCLOSED VEHICLE.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.



Phorate® 20G

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and wildlife. Birds feeding in treated areas may be killed. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Collect or incorporate granules that are spilled during loading or are visible on soil surface in turn areas. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not use this product through any type of irrigation system.

NOT FOR USE OR STORAGE IN OR AROUND THE HOME.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 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 (PPE), notification to workers, and restricted-entry interval.

The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Each 48-hr. REI is increased to 72 hours in outdoor areas where average rainfall is less than 25 inches per year.

Exception: If the product is soil-injected, or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: chemical-resistant protective suit, waterproof gloves, chemical resistant footwear plus socks, protective eyewear, and chemical-resistant headgear for overhead exposure.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.



Have pesticides (herbicides, insecticides, fungicides, miticides, etc.) been applied or has a restricted-entry interval been in effect within the last 30 days?

NO

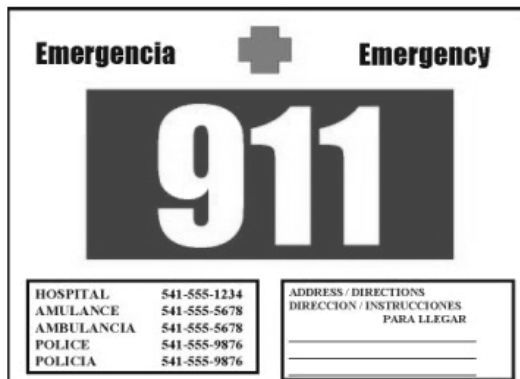


WPS Applies & Hazard
Communication applies.



Some specific WPS requirements do **not** apply - Hazard Communication applies.

- Central posting location can either be at the main farm if workers report there, or if workers report directly to the field, it can be at the field location.
- Post the WPS poster and emergency contact information.





Review—Which Rule Applies?

List the pesticides which have been applied within the last 30 days or have had a restricted-entry interval in effect within the last 30 days. Provide the following information for each:

- Location of application
- Product name
- EPA registration number
- Active ingredients
- Time and date of the application
- Restricted entry interval

Tell the workers where is the central posting location and, Keep the poster and emergency information legible. See the example pesticide application below.

EXAMPLE PESTICIDE APPLICATION RECORD

Area Treated	Product Name	EPA Reg. Number	Common Name Active Ingredient	Application Month/Day/ Time	Restricted Entry Interval (REI)	Do Not Enter Until: Month/Day/ Time
Pears Home Place	Dimethoate 2.67EC	34704-489	Dimethoate	May 5 11 am	10 days	May 15 th 11am
Blueberries Abilene Block	Captan 4L	19713-644	Captan	April 11 10:30 am	48 hours	April 13 th 10:30 am
Grass Seed Field/Howell Prairie	Roundup Ultra	524-475	Glyphosate	March 25 2pm	4 hours	March 25 th 6pm

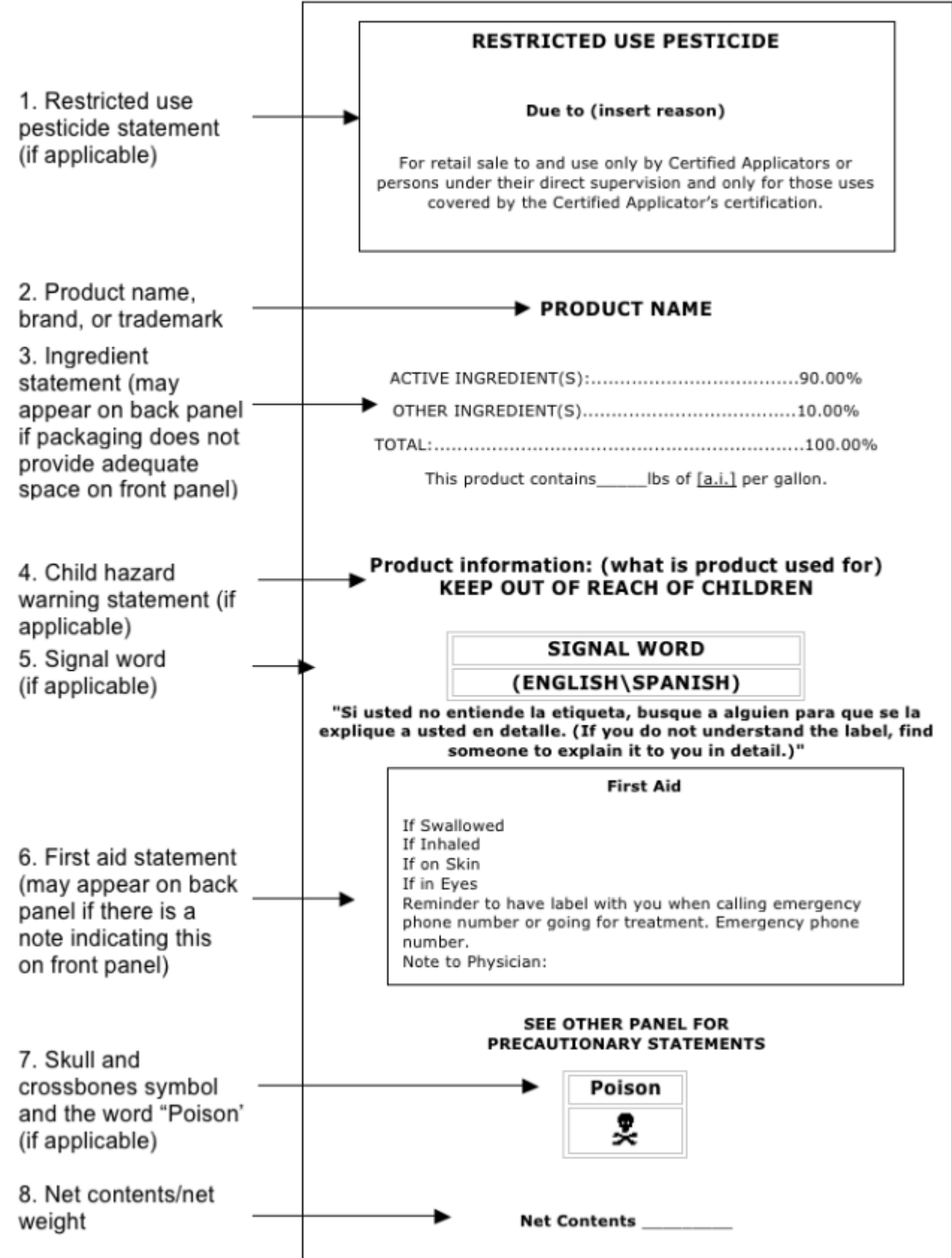


Worker Protection Standard Pesticide Emphasis

Appendix



Label Review—Parts of the Label



For more information on understanding pesticide labels go to the EPA page:
<https://www.epa.gov/pesticide-labels>

Federal EPA Quick Reference Handout

Duties for ALL Employers

QUICK REFERENCE GUIDE TO THE WORKER PROTECTION STANDARD (WPS) AS REVISED IN 2015

The WPS is a federal regulation designed to protect agricultural workers (people employed in the production of agricultural plants) and pesticide handlers (people mixing, loading, or applying pesticides or doing certain tasks involving direct contact with pesticides). Each section links to the Code of Federal Regulations (40 CFR, Part 170) for more information on the revised WPS. (www.ecfr.gov)

The guide summarizes the maximum requirements under the revised WPS. It does not include exemptions and exceptions that may allow you to do less. See the referenced sections below.

Exemptions (general) [170.303 \(b\)](#) and [170.601](#)
Exemptions for workers [170.401 \(b\)](#) and [170.409 \(a\)\(2\)](#)

Exceptions for early-entry workers during a restricted-entry interval [170.603](#)

Exceptions for handlers [170.501 \(b\)](#)
Exceptions to PPE required on pesticide labels [170.607](#)

Employer Responsibilities for Supervisors and Labor Contractors

Employers must provide sufficient information to supervisors and/or labor contractors to ensure compliance with the revised WPS. Specifically:

- The tasks supervisor/labor contractors must do, and
- The information they must provide to workers/handlers.

Employers are liable for a penalty under FIFRA if a supervisor or labor contractor acting for them fails to comply with the revised WPS requirements. [170.309 \(d\)](#), [170.313 \(d\)](#), [170.317 \(g\)](#)

These requirements apply to agricultural employers and commercial pesticide handler employers except the pesticide safety, application and hazard information requirements apply only to agricultural employers.

Anti-Retaliation

Employers must not retaliate against a worker or handler who attempts to comply with the WPS, files a complaint, or provides information in an investigation of alleged WPS noncompliance. [170.315](#)

Minimum Age Requirements

1. Ensure that early-entry workers and all handlers are at least 18 years old. [170.309 \(a\)](#) and [170.313 \(e\)](#)

Pesticide Safety, Application and Hazard Information

An agricultural employer must display or make certain information available on the establishment. Commercial pesticide handler employers do not have to comply with information display requirements.

1. Display or make available all of the information listed in #2 together in an easily accessible ("central") location on the agricultural establishment. [170.311 \(a\)\(5\)](#) and [170.311 \(b\)\(2\)](#).
2. The information includes:
 - EPA WPS safety poster or equivalent information, which must include some additional information by January 2, 2018, and must be kept current. [170.311 \(a\)](#)
 - Application information that includes:
 - o Product name, EPA registration number, and active ingredient
 - o Crop or site treated, location and description of the treated area
 - o Date, start and end times of the application, and duration of restricted-entry interval (REI). [170.311 \(b\)\(1\)](#)
 - A copy of the safety data sheet (SDS) for the formulated product for each WPS-labeled pesticide applied. [170.309](#) and [170.311](#)
3. In addition, display the EPA WPS safety poster (or equivalent) where decontamination supplies are located at permanent sites and where decontamination supplies are provided for 11 or more workers. [170.311 \(a\)\(5\)](#)
4. Allow workers and handlers unrestricted access to all of the information and keep all of the displayed information current and legible. [170.311 \(a\)\(9\)-\(7\)](#) and [170.311 \(b\)\(3\)-\(4\)](#)
5. Display the EPA WPS safety poster or equivalent information before an application takes place and for 30 days after the REI expires. [170.309 \(h\)](#)
6. Display the SDS and application information within 24 hours of the application and before workers enter treated areas. This information must be displayed for 30 days after the REI expires and kept in records on the agricultural establishment until 2 years after the REI expires. [170.309 \(h\)\(4\)](#) and [170.311 \(b\)\(5\)-\(6\)](#)
7. Provide the SDS and application information upon request of a worker, handler, designated representative or medical personnel, within 15 days. [170.311 \(b\)\(7\)-\(8\)](#)

Pesticide Safety Training

Ensure that workers are trained before performing tasks in a pesticide treated area (REI in effect within the last 30 days). [170.401 \(a\)](#) Ensure that handlers are trained before performing any handler activity. [170.501 \(a\)](#). There is no grace period for worker or handler training.

1. Train workers and handlers annually. [170.401 \(a\)](#) and [170.501 \(a\)](#)
2. Present training using EPA-approved materials either orally from written materials or audio-visually. After January 2, 2018, the training must cover additional topics. [170.401 \(a\)](#) and [170.501 \(a\)](#)
3. Trainers must be certified applicators or have completed an EPA-approved train-the-trainer program or be designated by the State or Tribal pesticide enforcement agency. [170.401 \(a\)\(4\)](#) and [170.501 \(a\)\(4\)](#)
4. Training must be delivered in a manner the employees can understand, and the trainer must be present and respond to questions. [170.401 \(a\)\(1\)](#) and [170.501 \(a\)\(1\)](#)
5. Maintain training records on the establishment for two years from the training date for each worker and handler required to be trained on the agricultural establishment. [170.401 \(d\)](#) and [170.501 \(d\)](#)

Continued on next column

Separate from the pesticide safety training, employers must tell workers and handlers where to find the following on the worksite: EPA WPS safety poster (or equivalent), application information, SDSs and decontamination supplies. [170.403](#) and [170.503 \(b\)](#)

Decontamination Supplies

1. Establish accessible decontamination supplies located together within 1/4 mile of all workers (when required [170.411 \(c\)](#)) and handlers. [170.411](#) and [170.509](#)
 - 1 gallon of water per worker and 3 gallons of water per handler at the beginning of each work period for routine and emergency decontamination,
 - Plenty of soap and single-use towels. Note: hand sanitizers and wet towelettes are insufficient. [170.411 \(b\)\(2\)](#) and [170.509 \(b\)\(2\)](#)
 - A clean coverall (or other clean change of clothes) for handlers
2. Provide water that is safe and cool enough for washing, eye-flushing, and drinking. Do not use water that is also used for mixing pesticides unless steps are taken to ensure safety. [170.411 \(b\)\(1\)](#)
3. Provide handlers with decontamination supplies where personal protective equipment (PPE) is removed at the end of a task. [170.509 \(a\)](#)
4. Provide handlers with decontamination supplies at each mixing and loading site. [170.509 \(c\)\(1\)](#)
5. When a product requires protective eyewear for handlers, and/or when using a closed system under pressure, provide the following in mixing and loading areas: a system that can deliver gently running water at 0.4 gallons per minute for at least 15 minutes or 6 gallons of water in containers suitable for providing a gentle eye-flush for about 15 minutes. [170.509 \(d\)\(1\)](#)
6. When applying a product that requires protective eyewear, provide 1 pint of water per handler in portable containers that are immediately available to each handler. [170.509 \(d\)\(2\)](#)
7. Do not put worker decontamination supplies in areas being treated or under an REI. [170.411 \(d\)](#)
8. For handlers, decontamination supplies must be kept outside the treated area, or any area under an REI, unless they are protected from contamination in closed containers. [170.509 \(e\)\(1\)&\(3\)](#)

Employer Information Exchange

1. Before any application, commercial pesticide handler employers must make sure the owner/operator of an agricultural establishment where a pesticide will be applied, is aware of:
 - Location and description of area to be treated,
 - Date of application, estimated start time and estimated end time of the application,
 - Product name, EPA registration number, active ingredient(s), and REI,
 - Whether the product label requires both oral warnings and treated area posting,
 - All other safety requirements on labeling for workers or other people. [170.313 \(i\)](#)
2. Owners/operators of agricultural establishments must make sure any commercial pesticide handler employer they hire is aware of:
 - Specific location and description of any treated areas where an REI is in effect that the commercial handler may be in or walk within 1/4 mile of, and,
 - Restrictions on entering those areas. [170.309 \(k\)](#)

The commercial pesticide employer must pass this information along to the handler doing the work. [170.313 \(h\)](#)

Emergency Assistance

If there is reason to believe a worker or handler has been exposed to pesticides, during or within 72 hours of employment, and needs emergency medical treatment, employers must do the following:

1. Promptly make transportation available to an appropriate emergency medical facility.
2. Promptly provide to the treating medical personnel, information related to each pesticide product to which the person may have been exposed:
 - Safety Data Sheet
 - Product name, EPA registration number, and active ingredient(s)
 - Description of how the pesticide was used on the agricultural establishment.
 - Circumstances that could have resulted in exposure to the pesticide. [170.309 \(f\)](#)

This is a summary of the requirements. It does not contain all the information to comply with the revised WPS. Refer to the regulations where indicated for complete details.

Federal EPA Quick Reference Handout

Additional Duties for Worker Employers

These requirements apply to agricultural employers who employ workers.

Restrictions During Applications [170.405 \(a\)-\(d\)](#)

During pesticide applications, keep workers and everyone other than appropriately trained and equipped handlers out of the treated area (for all types of applications) and out of:

- The application exclusion zone (AEZ) for outdoor production, or
- A specified area that varies by the type of application until the ventilation criteria are met for enclosed space production.

Restricted-Entry Intervals (REIs) [170.308 \(i\)](#) and [170.407](#)

Do not direct or allow any worker to enter or remain in the treated area until the REI has expired and all posted warning signs are removed or covered. Read the exceptions in [170.603](#).

Notice About Applications [170.409 \(a\)](#)

1. Orally warn workers and post treated areas if required by the pesticide labeling.
2. If not, post warning signs if the REI is greater than:
 - 48 hours for outdoor production or
 - 4 hours for enclosed space production.
3. For all other applications, either orally warn workers or post warning signs.

Posted Warning Signs [170.409 \(b\)](#)

1. Post legible 14" x 16" WPS-design warning signs no more than 24 hours prior to an application; keep posted during REI; remove or cover before workers enter and within 3 days after the end of the REI. [170.409 \(b\)\(1\)-\(3\)](#)
2. Post signs so they can be seen at all reasonably expected entrances to treated areas. [170.409 \(b\)\(3\)\(ii\)](#)
3. Warning signs must be smaller than 14" x 16" under certain conditions. All warning signs must meet specific requirements. [170.409 \(b\)](#)

Oral Warnings [170.409 \(c\)](#)

1. Before each application, tell workers who are on the establishment (in a manner they can understand):
 - Location and description of treated area,
 - Date and times entry is restricted
 - AEZ, REI, and not to enter during REI.
2. Workers who enter the establishment after application starts must receive the same warning at the start of their work period.

Additional Agricultural Employer Duties

Before allowing persons not directly employed by the establishment to clean, repair, or adjust pesticide application equipment, provide the following information:

- The equipment may be contaminated with pesticides.
- The potentially harmful effects of pesticide exposure.
- How to handle equipment to limit exposure to pesticides.
- How to wash themselves and/or their clothes to remove and prevent exposure to pesticide residues. [170.308 \(a\)](#) and [170.313 \(i\)](#)

Additional Duties for Handler Employers

These requirements apply to commercial pesticide handler employers and agricultural employers who employ handlers.

Application Restrictions and Monitoring [170.505](#)

1. Do not allow handlers to apply a pesticide so that it contacts, directly or through drift, anyone other than appropriately trained and equipped handlers.
2. Handlers must suspend applications when anyone other than appropriately trained and equipped handlers enter the application exclusion zone (AEZ). This goes into effect on January 2, 2018. [170.505 \(b\)](#)
3. When anyone is handling a highly toxic pesticide with a skull and crossbones, maintain eight or more contact every two hours.
4. Make sure a trained handler equipped with labeling-specific PPE maintains constant voice or visual contact with any handler in an enclosed-space production site (e.g., greenhouses, high tunnels, indoor grow houses) while applying a fumigant.

Specific Instructions for Handlers

1. Before handlers do any handling task, inform them, in a manner they can understand, of all pesticide labeling instructions for safe use. [170.503 \(a\)\(1\)](#)
2. Ensure that the handler has access to product labeling during the entire handling task. [170.503 \(a\)\(2\)](#)

Equipment Safety

1. Inspect pesticide handling equipment before each day of use, and repair or replace as needed. [170.309 \(i\)](#) and [170.313 \(g\)](#)
2. Allow only appropriately trained and equipped handlers to repair, clean, or adjust pesticide equipment that contains pesticides or residues, unless they are not employed on the establishment. [170.309 \(a\)](#) and [170.507 \(a\)](#) See Additional Agricultural Employer Duties for information regarding non-employed persons.

Personal Protective Equipment (PPE) Handlers Must Use

1. Provide handlers with the PPE required by the pesticide labeling, and be sure it is: [170.507 \(b\)](#)
 - Clean and in operating condition. [170.507 \(b\)](#)
 - Worn and used according to the manufacturer's instructions. [170.507 \(c\)](#)
 - Inspected before each day of use. [170.507 \(c\)\(2\)](#)
 - Repaired or replaced as needed. [170.507 \(c\)\(2\)](#)
2. When a respirator is required by product labeling, provide handlers with:
 - A medical evaluation to ensure the handler is physically able to safely wear the respirator.
 - Training in respirator use, and
 - A fit test to ensure the respirator fits correctly.
 - Keep records on the establishment of these items for two years. [170.507 \(b\)\(1\)\(i\)](#)
3. Take steps to avoid heat-related illness when labeling requires the use of PPE for a handler activity. [170.507 \(e\)](#)
4. Provide handlers a pesticide-free area for:
 - Storing personal clothing not in use.
 - Putting on PPE at start of task.
 - Taking off PPE at end of task. [170.507 \(d\)\(8\)](#)
5. Do not allow used PPE to be taken home. [170.507 \(d\)\(10\)](#)

Care of PPE

1. Store and wash used PPE separately from other clothing and laundry. [170.507 \(d\)\(3\)](#)
2. If PPE will be reused, clean it before each day of reuse, according to the instructions from the PPE manufacturer unless the pesticide labeling specifies other requirements. If there are no other instructions, wash in detergent and hot water. [170.507 \(d\)\(1\)](#)
3. Dry the clean PPE before storing. [170.507 \(d\)\(4\)](#)
4. Store clean PPE away from personal clothing and apart from pesticide-contaminated areas. [170.507 \(d\)\(5\)](#)

Replacing Respirator Purifying Elements

1. Replace particulate filters or filtering facepiece respirators when any following condition is met:
 - When breathing becomes difficult.
 - When the filter is damaged or torn.
 - When the respirator label or pesticide label requires it.
 - After 8 total hours of use, in the absence of any other instructions or indications of service life. [170.507 \(d\)\(6\)](#)
2. Replace vapor-removing cartridges/canisters when any following condition is met:
 - When odor/taste/irritation is noticed.
 - When the respirator label or pesticide label requires it (whichever is shorter).
 - When breathing resistance becomes excessive.
 - After 8 total hours of use, in the absence of any other instructions or indications of service life. [170.507 \(d\)\(7\)](#)

Disposal of PPE

1. Discard, do not clean, coveralls and other absorbent materials that are heavily contaminated with pesticide having a signal word "DANGER" or "WARNING." When discarding PPE, ensure that it is unusable as apparel or made unavailable for further use.
2. Follow federal, state, and local laws when disposing of PPE that cannot be cleaned correctly. [170.507 \(d\)\(2\)](#)

Instructions for People Who Clean PPE

[170.507 \(d\)\(8\)](#)

The handler employer must inform people who clean or launder PPE:

- That PPE may be contaminated with pesticides.
- Of the potential for harmful effects of exposure to pesticides.
- How to protect themselves when handling PPE.
- How to clean PPE correctly, and
- Decontamination procedures to follow after handling contaminated PPE.



United States
Environmental Protection
Agency

[www.epa.gov](#)



Pesticide Educational
Resources Collaborative

[www.pesticideresources.org](#)

This was developed under cooperative agreement #X8-83616301.
EPA-305-B-16-001

Throughout this course we have referenced, and at times quoted, the PERC EPA How to Comply Manual.

To download this manual go to:

<http://pesticideresources.org/wps/htc/index.html>



How to Comply With the 2015 Revised Worker Protection Standard For Agricultural Pesticides

What Owners and Employers Need To Know



Conditions for Early Entry

These are the conditions of the exception for early entry irrigation activities referenced in 170.112(e)(7)(i) and (ii):

1. The pesticide product does not have a statement in the labeling requiring double notification (workers must be notified both verbally and by posting of these high toxicity pesticides);
2. The workers do not enter the area during the first 4 hours, and until applicable ventilation criteria have been met, and until any label specified inhalation exposure level has been reached;
3. Before workers enter a treated area under an REI, the agricultural employer shall give them oral or written notification of the specifics of the exception to early entry. The notification must be in a language that the workers understand;
4. The workers' contact with treated surfaces is minimal and is limited to the feet, lower legs, hands, and forearms;
5. Personal protective equipment for early entry is provided to the worker and must either conform with the label requirements or include at least coveralls, chemical resistant gloves, socks, chemical resistant footwear, and eyewear (if eyewear is required by the product labeling);
6. No hand labor activity (such as: hoeing, picking, pruning, etc.) is performed;
7. The time in treated areas under a REI for any worker may not exceed 8 hours in a 24 hour period.

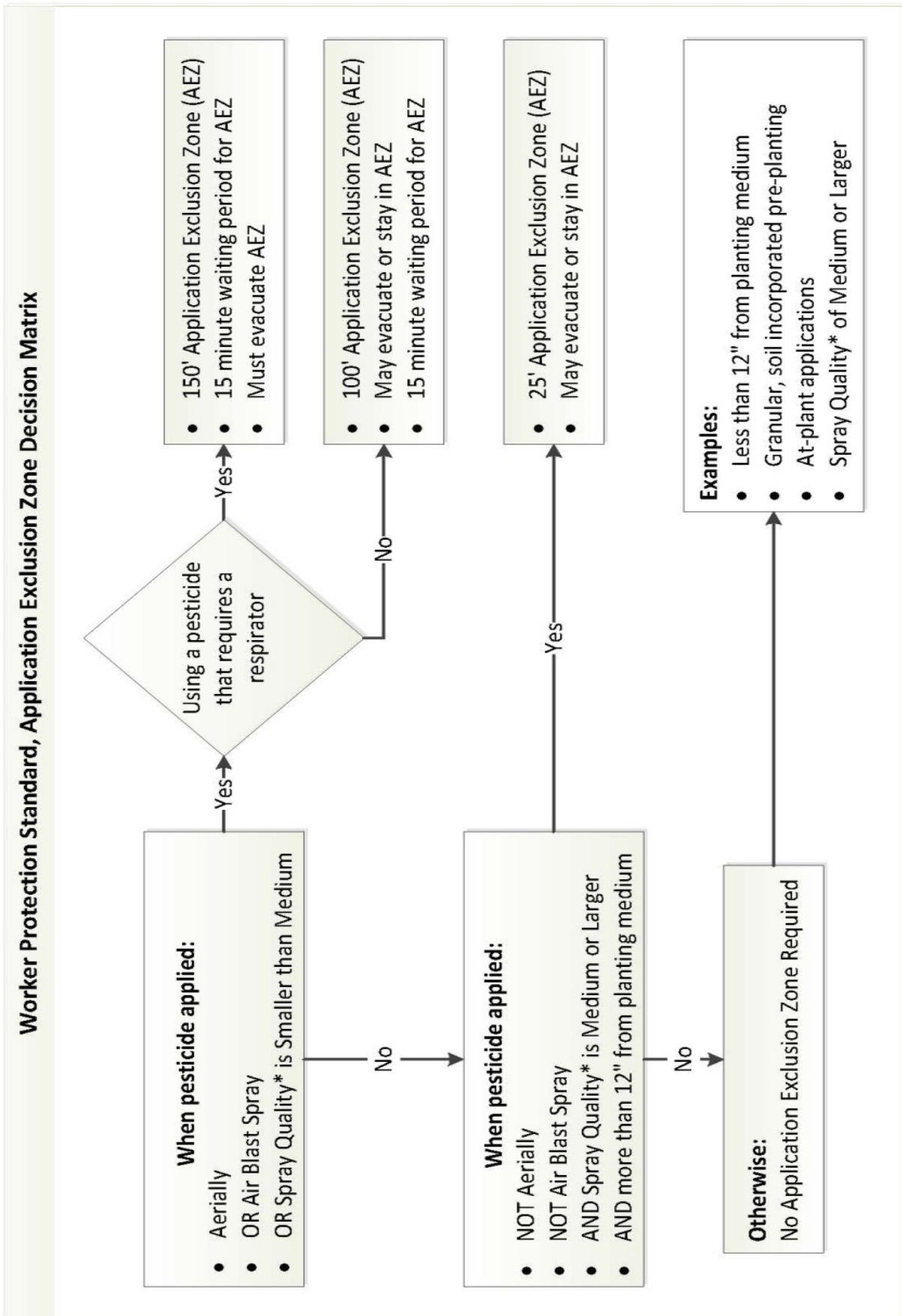
PESTICIDE APPLICATION RECORD

Area Treated	Product Name	EPA Reg. Number	Common Name Active Ingredient	Application Month/Day/Time	Restricted Entry Interval (REI)	Do Not Enter Until: Month/Day/Time

Worker Protection Standard

Application Exclusion Zone Decision Matrix (See Page 8)

<https://osha.oregon.gov/OSHARules/adopted/2018/ao2-2018-ltr-WPS-AEZ.pdf>





Droplet Size Classification

http://info.sprayerdepot.com/hs-fs/hub/95784/file-32015844-pdf/docs/asabe_s572.1_droplet_size_classification.pdf

ASABE S572.1 Droplet Size Classification

The American Society of Agricultural and Biological Engineers (ASABE) developed the ASABE S572.1 standard to measure and interpret spray quality from tips.

Spray Quality*	Size of Droplets	VMD Range (Microns**)	Color Code	Retention on Difficult to Wet Leaves	Used for	Drift Potential
Extremely Fine	Small	<60	Purple	Excellent	Exceptions	High
Very Fine		61-105	Red	Excellent	Exceptions	
Fine		106-235	Orange	Very Good	Good Cover	
Medium		236-340	Yellow	Good	Most Products	
Coarse		341-403	Blue	Moderate	Systemic Herbicides	
Very Coarse		404-502	Green	Poor	Soil Herbicides	
Extremely Coarse	Large	503-665	White	Very Poor	Liquid Fertilizer	Low
Ultra Coarse		>665	Black	Very Poor	Liquid Fertilizer	

*Always read the pesticide label to determine which spray quality is required.

**Estimated from sample reference graph in ASABE/ANSI/ASAE Standard S572.1

ASABE S572.1 standard uses eight droplet classification categories, six of which are common for agriculture and horticulture:

Very Fine

Fine

Medium

Coarse

Very Coarse

Extremely Coarse

Most agrochemical applications recommend a fine, medium, or coarse spray:

Fine

sprays provide enhanced retention for directed spraying on the target including:

- Foliar-acting weed control
- Contact-acting fungicides and insecticides

Medium

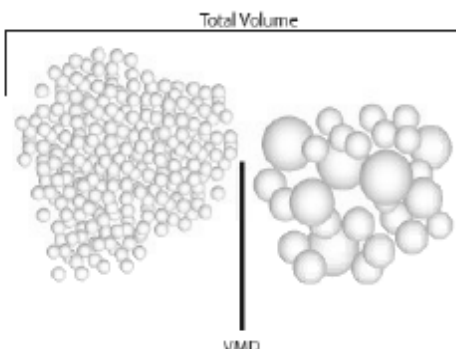
sprays are the most widely used spray type.

- Used by default by most applicators when spray quality is not defined by the label
- Systemic-acting fungicides, insecticides and herbicides.

Coarse

sprays are used with systemic, residual, and soil-applied herbicides.

A. Understanding Droplet VMD



VMD is the droplet size at which 50% of the spray volume is in droplets larger than the VMD and 50% of the volume is in droplets smaller than the VMD (adapted from Matthews 1992).

Degree of Atomization	Droplet Size (Microns)	Relative Size Related to Common Objects
Fog	Up to 25	Point of a Needle (25 Microns)
Fine Mist	20-100	Human Hair (100 Microns)
Fine Drizzle	100-250	Sewing Thread (150 Microns)
Heavy Drizzle	250-500	Toothbrush Bristle (300 Microns)
Light Rain	500-800	Staple (550 Microns)
Heavy Rain	800-1000	Paper Clip (850 Microns)
Thunderstorm Rain	1000-4000	#2 Pencil Lead (2000 Microns)

Droplet sizes are usually expressed in microns (micrometers). One micron equals one thousandth of a millimeter. Other than the effects of the specific material being sprayed, the four major factors effecting droplet size are: tip style, capacity, spraying pressure and spray pattern type. Lower spraying pressures provide larger droplet sizes, while higher spraying pressures yield smaller droplet sizes. The smallest droplet sizes are achieved by air atomizing tips. Generally speaking, the largest spray droplets are produced by wide-angle, flat hydraulic spray tips. In the hydraulic spray tip series, the smallest droplet sizes are produced by hollow-cone spray tips.



Worker Protection Standard QR Codes for Reference Materials

English



ASABE S572.1
Droplet Size Classification



EPA Pesticide Labels



EPA Quick Reference Handout



OR OSHA AEZ Decision Matrix



PERC EPA
"How to Comply Handout"

Español



GUÍA DE REFERENCIA RÁPIDA SOBRE
EL ESTÁNDAR PARA LA PROTECCIÓN
DEL TRABAJADOR
(EPA Quick Reference Handout)



Ley Nacional de Protección del Trabajador:
Manual para Capacitadores

Oregon OSHA Consultation Services



What are Oregon OSHA consultation services?

Oregon OSHA consultation provides many no-cost, confidential services, including:

- Safety, health, and ergonomic hazard assessments
- Recommendations to control and eliminate hazards
- Written program evaluation
- Industrial hygiene services, such as noise monitoring
- Hands-on training on health and safety topics
- Safety and health program assistance

Oregon OSHA Consultants WILL NOT:

- Issue citations for violations of OSHA standards
- Provide other businesses with information about your Oregon OSHA participation, hazards, or business processes
- Guarantee that your workplace will "pass" an Oregon OSHA inspection

What will the consultant want to see?

- If you request a *comprehensive* consultation, the consultant will conduct an evaluation of the physical worksite, then review your records, written programs, and your safety and health management plan.
- If you request a *specific* consultation, the consultant can focus on a specific operation, machine, or process at your worksite. You are in charge!

What are my obligations if I request an Oregon OSHA consultation?

When you request an Oregon OSHA consultation, you will receive a report listing the hazards identified along with our recommendations for corrections. Oregon OSHA encourages you to correct the hazards to make your worksite a safe place for your employees. However, if a consultant identifies an "imminent danger" situation, the employer must take immediate action to protect all employees.

The Benefits for You

Improving your safety and health program can result in fewer accidents, lower injury and illness rates, decreased workers' compensation costs, increased employee morale, and lower product losses. A consultation will include:

- Personal, professional, and relevant assistance specific to your business
- Guidance on effective safety meetings and safety committees
- Answers to questions about Oregon OSHA standards
- A 30- or 60-day exemption from a standard inspection

How can your organization learn more?

Oregon OSHA consultants are available to present program information at safety-related forums such as meetings, trainings, business seminars, or safety/health conferences. Schedule a consultation or contact us for more information by:

- Visit our website: www.orosha.org
- Consultation link
- Calling our toll-free number 800-922-2689

What other services does Oregon OSHA provide?

Do you have a safety or health question?

Ask our technical experts:

Phone: 503-378-3272 or 800-922-2689

tech.web@oregon.gov

Educational workshops and other training:

Phone: 503-947-7443 or 888-292-5247, Option 2

ed.web@oregon.gov

Resource Center and AV Library:

Phone: 503-947-7453 or 800-922-2689

tech.web@oregon.gov

Upcoming conferences information:

Phone: 503-378-3272 or 888-292-5247, Option 1

oregon.conferences@oregon.gov





In Compliance with the Americans with Disabilities Act (ADA),
this publication is available in alternative formats by calling the
Oregon OSHA Public Relations Manager at (503) 378-3272 (V/TTY)



Worker Protection Standard

This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Worker Protection Standard

[illegible]



Worker Protection Standard

[illegible]



Worker Protection Standard

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Worker Protection Standard

[illegible]