

Oregon OSHA's Application Exclusion Zone for the Worker Protection Standard Rules.

October 2017

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DIVISION 4, AGRICULTURE

Division 4/W, Worker Protection Standard

Note: Oregon OSHA has declined to adopt 40 CFR 170.405(a). In Oregon OAR 437-004-6405 applies.

OAR 437-004-6405 Restrictions associated with outdoor production pesticide applications.

This rule applies in Oregon where workers or other people are adjacent to pesticides being applied in outdoor production areas that are within the boundaries of the establishment.

1) 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).

2) Enclosed agricultural structure: a fully-enclosed space with an interior area that shelters occupants from dermal exposure to pesticide spray drift.

3) Application Exclusion Zone (AEZ): The AEZ is an area that moves with and exists in relationship to the application equipment. The number of feet shown is the radius of the area surrounding the application equipment extending downward during the application process and may extend beyond the treated area. Pesticide labels that have more stringent restrictions regarding distances must be followed. The agricultural employer or handler employer must not allow or direct any worker or other person to enter or remain in the AEZ for 15 minutes after the application creating the exclusion zone is complete for a distance as follows:

a) an AEZ of 150 feet when the label requires the handler to use respiratory protection, and the method of application is by air blast sprayer, applied aerially or has a spray quality smaller than medium.

- b) an AEZ of 100 feet when the label does not requires the handler to use respiratory protection, and the method of application is by air blast sprayer, applied aerially or has a spray quality smaller than medium.
- c) an AEZ of 25 feet when not applied aerially or through an air blast sprayer and sprayed from a height of greater than 12 inches from the planting medium and when using a spray quality of medium or larger.
- d) Exceptions to the AEZ include the following:
 - (A) Appropriately trained and equipped handlers involved in the application, or
 - (B) Occupants of an enclosed agricultural structure when allowed in paragraph (8)(c) below.

NOTE: Any method other than those covered above does not have an AEZ. Examples include applications of granular, soil incorporated (other than fumigants) pre-plant, and at-plant pesticide applications as long as they are applied from a distance of less than 12 inches from the planting medium and use a spray quality of medium or larger. See Table 1 -- Restrictions associated with outdoor production pesticide applications.

4) The agricultural employer must ensure that prior to pesticide applications, any enclosed agricultural 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:

- a) All doors and windows closed; and
- b) Any air in-take devices or mechanisms turned off; and
- 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.

5) Employers must provide the following information, 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.

6) Employers must provide information and will ensure that all adult occupants of enclosed agricultural structures within the AEZ have access to:

- a) An information station located in close proximity to enclosed agricultural structures that contain information on pending applications, with a means of alerting occupants to changing information.

- b) Information on how to prevent and reduce pesticide exposure.
- c) Information about the location of the pesticide safety information required by Sec. 170.311(a)

7) If anyone other than a trained and protected handler exits an enclosed agricultural structure and enters the AEZ the handler must suspend the pesticide application as per Sec. 170.505(b).

Table 1 -- Restrictions associated with outdoor production pesticide applications.

<u>Application Method</u>	<u>Any other</u>	<u>ground boom / backpack sprayer (powered or unpowered)</u>	<u>air blast or aerial spraying</u>	<u>air blast or aerial spraying</u>
<u>Spray quality*</u>	<u>Medium or larger</u>	<u>Any size</u>	<u>Smaller than medium</u>	<u>Smaller than medium</u>
<u>Respirator required on the label</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Required Respirator</u>
<u>Application Exclusion Zone (AEZ)</u>	<u>0 feet or Not required AEZ</u>	<u>25 feet</u>	<u>100 feet</u>	<u>150 feet</u>
<u>Stay or Evacuate from the AEZ**</u>	<u>-</u>	<u>Stay or Evacuate the AEZ</u>	<u>Stay or Evacuate the AEZ</u>	<u>Evacuate the AEZ</u>

*Spray quality: (as defined by the American Society of Agricultural and Biological Engineers Standard S-572.1) 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:

Smaller than medium (droplet spectrum with volume median diameter of less than 294 microns+):

Extra fine (XF)

Very fine (VF)

Fine (F)

Medium or larger (droplet spectrum with volume median diameter of 294 microns or more):

Medium (M)

Coarse (C)

Very coarse (VC)

Extra coarse (XC)

Ultra coarse (UC)

+Micron = (um) =micrometer: Standard unit of measure for particulate matter. 1 um is 1/1000th of a millimeter.

** Stay or Evacuate from the AEZ meeting criteria and notification requirements.

8) Determining whether to evacuate the AEZ or stay in an enclosed agricultural structure:

a) When the pesticide being applied is a fumigant, a smoke, or a fog the structures must be fully evacuated.

b) When the pesticide applied requires the use of a respirator, any worker or other person must evacuate the AEZ.

c) When the pesticide applied does not require the use of a respirator, workers or other persons can remain in the enclosed agricultural structure when the requirements of (4) or (5) are met and:

(A) The enclosed agricultural structure provides protection from pesticide spray contacting the skin.

(B) Enclosed agricultural structures have walls, ceilings, and floors that minimize the entry of outside air when doors, windows, and mechanical air intakes are closed.

d) When the employer chooses to evacuate any worker or other person from the AEZ, the requirements listed above in paragraph (4) and (5) must be followed.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 – 654.295, 654.750 – 654.780.

Hist.: OR-OSHA Admin. Order X-2017, f. XX/XX/XX, ef. XX/XX/XX.

OAR 437-004-6406 Pesticide spray drift and innovative methods:

1) Agricultural employers and handler employers must ensure that pesticide spray applications under their control do not drift and make contact with labor housing areas or other structures used by employees, including enclosed agricultural structures within an AEZ.

2) To encourage innovation including the use of EPA's Drift Reduction Technology, and other methods that the employer can demonstrate reduces the potential for spray drift, Oregon OSHA may grant approval for an AEZ that differs from the rule requirements yet meets the intent of these rules through the variance process described in OAR 437-001-0400.

NOTE: Examples of possible innovations include advanced application practices for handlers in the prevention of spray drift and the use of the Environmental Protection Agency's Drift Reduction Technologies. Another example could include two applicators, one monitoring conditions and remaining in contact with applicator of the treated area.

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