

Worker Protection Standard Application Exclusion Zone Requirements

Updated Question and Answers

2/15/2018

Agricultural Worker Protection Standard (WPS) Application Exclusion Zone (AEZ) Requirements Fact Sheet

Introduction

This fact sheet contains further explanation of the Application Exclusion Zone (AEZ) requirement in the Agricultural Worker Protection Standard WPS.

The AEZ is closely related to existing WPS requirements: All agricultural pesticide product labels include this statement: “Do not apply this product in a way that will contact workers or other persons, either directly or through drift.” **This “do not contact” requirement is not limited by distance or the boundaries of the establishment and applies whether people are on or off the agricultural establishment and regardless of how far away they are from the application.**

In addition, when you use a pesticide product with labeling that refers to the [Worker Protection Standard \(WPS\)](#), you must comply with the requirements of the federal WPS (Code of Federal Regulations (CFR), [Title 40, Part 170](#)). If you do not comply with the WPS requirements, you will be in violation of federal law. One of the most important WPS requirements is that the handler (in this case, the applicator) and his or her employer must ensure that no pesticide is applied so as to contact, directly or through drift, any worker or other people, other than appropriately trained and equipped handlers involved in the application. This “do not contact” requirement applies to both handlers and handler employers. This requirement has been part of the WPS since its original 1992 publication,

The AEZ requirements supplement these general “do not contact” requirements by setting specific requirements within defined areas around ongoing pesticide applications. These requirements specify the responsibilities of both agricultural employers and handlers in regard to persons within the AEZ. Both requirements are discussed in more detail below. In regard to outdoor agriculture, the AEZ is an area surrounding pesticide application equipment that exists only during pesticide applications.¹

The AEZ requirements are intended to reduce the number of cases where workers or bystanders are contacted by pesticides during agricultural pesticide applications.

As of January 2, 2018, full compliance is required with all of the AEZ-related requirements in the WPS.

¹ NOTE: There are comparable but different AEZ-type requirements for enclosed space production that are not addressed in this fact sheet. Please refer to pp. 39-41 in [Chapter 3 of the WPS How to Comply Manual](#).

Questions and Answers

1. Q: What is the AEZ, and how does it differ from what is already required on the pesticide label?

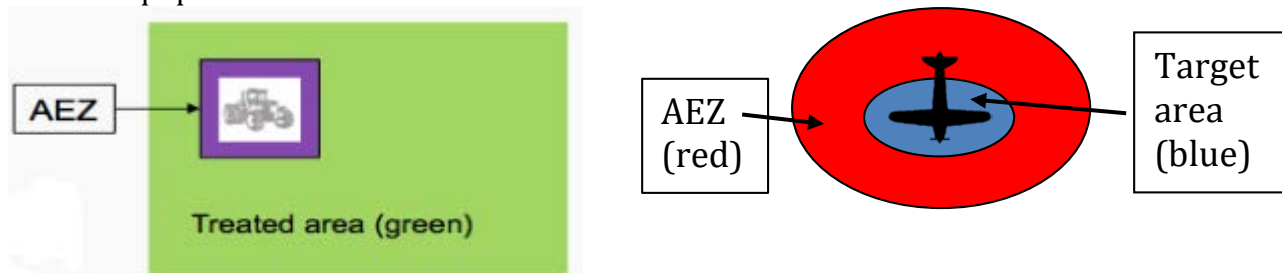
A: As mentioned above, the AEZ requirements supplement the “do not contact” requirement on the label by establishing minimum exclusion zones around ongoing pesticide applications that people must be kept out of. Outdoors, the AEZ exists only during pesticide application.

Click to see animations of how the AEZ works:

<https://youtu.be/kTc4htbdX6g> and <https://youtu.be/XBuaW7FvIQI>.

The AEZ is different from the target/treated area, which is where the pesticide is being applied. If the application goes as planned, there is no pesticide in the AEZ. The AEZ is an extra “cushion” to ensure that workers and other persons are not contacted by pesticides during agricultural pesticide applications.

The AEZ moves with the application equipment like a halo around the application equipment. As the application equipment moves, new areas around the application become part of the AEZ, and areas that were in the AEZ cease to be within the AEZ once the application equipment has moved on.



The AEZ is the purple area around the application equipment. It moves with the application equipment as it proceeds.

Once an area is no longer part of the AEZ, the AEZ restrictions no longer apply to that area. Note that post-application entry restrictions applicable to treated areas may apply. Entry into the treated area is subject to the restricted-entry interval (REI) specified on the pesticide product labeling and to the relevant WPS restrictions after applications.

2. Q: What is the agricultural employer’s responsibility for the AEZ?

A: Agricultural employers must not allow any worker or other person (other than appropriately trained and equipped handlers involved in the application) in the AEZ that is within the boundaries of the agricultural establishment when the application is occurring.

This includes people occupying migrant labor camps or other housing or buildings that are located on the agricultural establishment.

This AEZ requirement is in addition to the WPS post-application entry restrictions applicable to treated areas.

The reason that this requirement *only applies within the boundaries of the establishment* is because the agricultural employer is not expected to control people off the establishment.

The agricultural employer must not allow a pesticide to be applied while any worker or other person (other than appropriately trained and equipped handlers involved in the application) on the establishment is in the treated area or within the AEZ.

3. Q: What is the pesticide handler's (in this case, the applicator's) responsibility for the AEZ?

A: Handlers making a pesticide application must temporarily suspend application if workers or other people (other than an appropriately trained and equipped handler involved with the application) are in the AEZ. The requirement for the handler to suspend the application *applies on and off the boundaries of the establishment*.

4.Q: What action should the handler take if a person enters the AEZ that is located *on the establishment*?

A: Suspend use until no people are present in the AEZ.

5.Q: What action should the handler take if a person enters the AEZ that is located *off the establishment*?

A: Take these steps:

- **Suspend:** If people are present, pause the application.
- **Evaluate:** Evaluate the situation and conditions and determine if you can resume the application without contacting anyone with the pesticide, either directly or through drift.
- **Resume:** Resume the application only if you are sure you can continue without it resulting in contact with any nearby workers or other persons.

6.Q: When and under what circumstances can a handler resume a pesticide application after suspending application as a result of a person entering the AEZ?

A: If there are people within the AEZ but *beyond the boundary of the agricultural establishment* being treated, the handler may proceed if he/she can ensure that the

pesticide will not contact any persons that are in this portion of the AEZ area. This includes scenarios where there may be homes, buildings, roads, or bike baths off the establishment. See answer to Q. 7

If there are people within the AEZ *within the boundary of the agricultural establishment*, the handler must not resume application until there are no people in the AEZ (other than appropriately trained and equipped handlers involved in the application). The agricultural employer must not allow or direct any worker or other person (other than an appropriately trained and equipped handler) to enter or to remain in the treated area or an application exclusion zone that is within the boundaries of the establishment until the application is complete.

7. Q: Please give more detail about the “Evaluate” step in #5. What are ways the handler can evaluate whether he/she can resume the application if people are present in the AEZ off the establishment?

A: Before resuming the application when workers or other persons are in the AEZ off the establishment, the handler must take measures to ensure that such workers or other persons will not be contacted by the pesticide application either directly or through drift.

Examples of such measures include:

- assessing the wind and other weather conditions to confirm he/she will prevent workers or other persons from being contacted by the pesticide either directly or through drift;
- adjusting the application method or employing drift reduction measures in such a way to ensure that resuming the application will not result in workers or other persons off the establishment being contacted by the pesticide;
- asking the workers or other persons to move out of the AEZ until the application is complete; or
- adjusting the treated area or the path of the application equipment away from the workers or other persons so they would not be in the AEZ.

It is important to note that this answer *only* applies to workers and other persons beyond the boundaries of the establishment; if a handler were to resume an application while workers or other persons *on* the establishment are still within the AEZ, that would give rise to a violation of § 170.405.

8.Q: How does one determine the size of the AEZ?

A: To determine the size of the AEZ, you measure outward from the farthest end nozzles on the application equipment horizontally in all directions. The size of the AEZ is determined by the application method and spray quality. Spray quality (defined by the American Society of Agricultural and Biological Engineers (ASABE) Standard S-572.1) is based on several factors including the nozzle design, system pressure, and speed of the application

equipment. The eight ASABE spray quality categories (which are also referenced in most nozzle charts) include:

- Smaller than medium:
 - Extra fine (XF)
 - Very fine (VF)
 - Fine (F)
- Medium or larger:
 - Medium (M)
 - Coarse (C)
 - Very coarse (VC)
 - Extra coarse (XC)
 - Ultra coarse (UC)

The AEZ must be a minimum of 100 feet horizontally in all directions when the pesticide is applied:

- By air (fixed wing or helicopter),
- By an air blast application method,
- As a spray using a spray quality smaller than medium (i.e., fine, very fine or extra fine), or
- As a fumigant, smoke, mist, or fog.

The AEZ must be a minimum of 25 feet horizontally in all directions when the pesticide is:

- NOT applied in a manner that would require a 100 foot AEZ, and
- Sprayed from a height of greater than 12 inches from the planting medium (soil) using a spray quality of medium or larger (i.e., medium, coarse, very coarse, extra coarse and ultra-coarse).

No AEZ is required when the pesticide is applied in a manner other than those covered above (i.e., equal to or less than 12 inches from the soil with medium or larger spray quality).

Situations where no AEZ is required include applications of granular pesticides, soil incorporated pesticides (not fumigants); pre-plant, at-plant, and spot-spray pesticide applications as long as they are less than 12 inches from the soil and use a medium or larger spray quality.

NOTE: If the pesticide product labeling contains specific instructions or requirements that conflict with the requirements of the Worker Protection Standard, always follow the instructions or requirements on the labeling. This is especially important when applying fumigants.

Additional Information on EPA's Worker Protection Standard is available at www.epa.gov/pesticide-worker-safety.