

# Appendix O

## Chlorpyrifos Interim Recommended Permit Conditions

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**Introduction** These recommendations apply to products containing chlorpyrifos labeled for the production of an agricultural commodity. Follow the most restrictive requirement, whether it is the label, regulations, or CAC conditions.

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**Definitions** *Application Block* - A field or portion of a field treated in a 24-hour period that typically is identified by visible indicators, maps, or other tangible means. The perimeter of the application block is the border connecting the outermost edges of the total area treated.

*Sensitive Site* - As described by labels, sensitive sites are areas frequented by non-occupational bystanders (especially children). These include residential lawns, pedestrian sidewalks, outdoor recreational areas such as school grounds, athletic fields, parks, and all property associated with buildings occupied by humans for residential or commercial purposes. Sensitive sites include homes, farmworker housing, or other residential building, schools, daycare centers, nursing homes, and hospitals. Non-residential agricultural buildings, including barns, livestock facilities, sheds, and outhouses, are not included in the prohibition.

*Setback distance* - Distance in feet that must separate sensitive sites from the application block. The distance must extend outward from the perimeter of the sensitive site to the perimeter of the application block. Setback distances must be established for chlorpyrifos applications near sensitive sites.

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**Application method restrictions**

1. All applications must take place with a minimum wind speed of 3 mph and not more than 10 mph as measured at a height of 4 feet above the ground;
  2. Airblast applications:
    - a. Spray the two outside crop rows from outside in, directing the spray into the treatment area and shutting off nozzles on the side of the sprayer away from the treatment area.
    - b. Shut off top nozzles when treating smaller trees, vines, or bushes to minimize spray movement above the canopy;
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# Chlorpyrifos Interim Recommended Permit Conditions, Continued

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## Application method restrictions (continued)

3. Chemigation applications:
    - The permittee or permittee's authorized representative, who is knowledgeable of the irrigation system, must be present at the treatment site during the application and must be trained as a pesticide handler;
  4. Granular applications:
    - Incorporate or clean-up granules that are spilled during loading or are visible on the soil surface in turn areas.
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## Determining application rate- Converting liquid volume to lbs AI/ac

Active ingredient (AI) application rate determines setback distance and is expressed as pounds of active ingredient per acre (lbs AI/ac). Liquid product labels usually have the application rate as pints or quarts of product per acre. To determine lbs AI/ac, the volume of product applied needs to be converted to pounds of active ingredient based on the amount of chlorpyrifos active ingredient in the product.

### Generalized formula:

*(lbs AI/gallon indicated on the label) × (product volume converted to gallons)*

### Example – Lorsban Advanced

- Proposed application rate is 2 pints/acre
  - Label states it contains 3.755 pounds of chlorpyrifos per gallon of product.
  - 8 pints in a gallon.
  - $\text{lbs AI/ac} = 3.755 \text{ lbs AI /gal} \times 2 \text{ pints/ac} \div 8 \text{ pints/gal} = 0.939 \text{ lbs AI/ac.}$
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# Chlorpyrifos Interim Recommended Permit Conditions,

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**Determining application rate-  
Converting row feet rate to lbs AI/ac**

Setback distances are for a broadcast application. When labels specify the application rate as fluid ounces per 1000 feet of row or 100 feet of row, the “broadcast equivalent application rate” is the rate of active ingredient (lbs AI/ac) within the entire application block. The “broadcast equivalent application rate” must be calculated to determine the setback distance.

Generalized formula converting fl oz per row feet to pints per acre

$$(fl\ oz\ per\ 1000\ row\ feet) \div (row\ width\ in\ inches) \times 32.67^*$$

\*32.67 is a factor combining several unit conversions, including inches to feet, square feet to acres, and fluid ounces to pints. For rates expressed as fl oz / 100 row feet, use 326.7 instead.

Example – Lorsban Advanced

- Label application rate for onions is 0.37 fluid ounces per 1000 feet of row, if the row spacing is 6 inches.
- Pints/acre =  $0.37 \times 32.67 \div 6 = 2.01$  pints/acre.
- 2.01 pints /acre is converted to lbs AI/ac using the calculation above.

**Setback distances**

A setback distance must be established for every chlorpyrifos application near a sensitive site. The setback distance must extend outward from the perimeter of the sensitive site to the perimeter of the application block.

Use the following application and rate specific setback distance tables for all chlorpyrifos applications.

Aerial application – fixed wing or rotary

Application Rate (lbs AI /ac)	<u>Occupied Sensitive Site</u> Setback Distance (feet)
≤1	250
>1 – 2.3	500

Ground applications

Application Rate (lbs AI/ac)	<u>Occupied Sensitive Site</u> Setback Distance (feet)	
	Sprinkle Chemigation or ground boom	Airblast
≤1	150	150
>1 – 2	350	350
>2 – 4	400	400
>4 – 6	prohibited	500

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# Chlorpyrifos Interim Recommended Permit Conditions,

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**Setback distances**  
(continued)

The CAC may use the setback distances in the table below if non-occupational bystanders will not occupy the sensitive site anytime during the application and for 1 hour after the end of the application.

To ensure sensitive sites are not occupied anytime during the application and for 1 hour after the application, the CAC must include additional permit conditions, such as written vacating agreements for sites that could trigger the occupied sensitive site setbacks, posting the occupied sensitive site setback distance, or observation / monitoring at the setback perimeter during the application and for an hour after the application.

Application Method	<u>Unoccupied</u> Sensitive Site Setback Distance (feet)
Ground Boom	25
Sprinkler Chemigation	50
Airblast	50*
Aerial	150

\*Dormant applications must comply with 3 CCR section 6960

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