Appendix J
1,3-Dichloropropene (Field Soil Fumigation) Recommended Permit Conditions and Enforcement Guidance

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Section J.1
Overview

Introduction

These recommended permit conditions and enforcement guidance apply to the use of pesticide products containing 1,3-dichloropropene (1,3-D) when applied by either mechanical soil injection or drip application systems to fields used for the production of agricultural crops.

Use of recommended permit conditions

Recommended permit conditions are drafted with mandatory language, with the intent for County Agricultural Commissioners (CACs) to be able to drop this language directly into any restricted material permit without modification, if they choose to adopt such recommendations. However, the recommended permit conditions are not intended by DPR to be independently enforceable. In order to be enforceable, CACs must adopt individual elements as a restricted material permit condition.

If adopted, these conditions would be in addition to any requirements found on 1,3-D pesticide product labeling and requirements found in Title 3, California Code of Regulations (3 CCR) sections 6434 and 6448 through 6448.2. In the event of a conflict between those requirements and an adopted recommended permit condition, the Commissioner should apply the strictest requirement.

Local conditions

CACs can develop more restrictive conditions based on local conditions.

Combination applications

Any application of either: (1) a product that includes 1,3-D and another fumigant; or (2) simultaneous applications of 1,3-D and another fumigant are subject to all applicable recommended permit conditions for each fumigant ingredient.

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Section J.2
Recommended Permit Conditions for All Application Methods

Effective date

These recommended permit conditions are for all 1,3-Dichloropropene (1,3-D) applications on or after January 1, 2026.

Buffer zone period

If a buffer zone is required by the "1,3-Dichloropropene Field Fumigation Requirements, rev. January 1, 2026," incorporated by reference in Title 3, California Code of Regulations (3 CCR) section 6448(d), the buffer zone period begins at the start of the application and lasts for a minimum of 48 hours after the application is complete.

The application is complete when the fumigant has stopped being delivered/dispensed into the soil and the soil has been sealed or the drip lines have been purged (if applicable).

Buffer zone posting

If a buffer zone is required by the "1,3-Dichloropropene Field Fumigation Requirements, rev. January 1, 2026," incorporated by reference in 3 CCR section 6448(d), posting the buffer zone is required unless there is a physical barrier that prevents bystander access to the buffer zone.

Buffer zone signs must be placed along or outside the perimeter of the buffer zone, at all usual points of entry and along likely routes of approach from areas where people not under the fumigating property operator's control may approach the buffer zone.

- Some examples of points of entry include, but are not limited to, roadways, sidewalks, paths, and bike trails.
- Some examples of likely routes of approach include, but are not limited to, the area between a buffer zone and a roadway, or the area between a buffer zone and a housing development.
- Prior to and during application, the certified applicator supervising the application is responsible to ensure compliance with this requirement. Once the application is complete, the fumigating property operator and the certified applicator (if different) are jointly responsible for compliance with this requirement.

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Recommended Permit Conditions for All Application Methods, Continued

Buffer zone posting, (continued)

Buffer zone signs must meet the following criteria:
- The printed side of the sign must face away from the application block toward areas from which people could approach.
- Signs must be posted no sooner than 24 hours prior to the start of the. application and remain posted until the buffer zone period has expired.
- Signs must be removed within 3 days after the end of the buffer zone period.

The buffer zone signs must contain the following information:
- The 'Do Not Walk' symbol,
- "DO NOT ENTER/NO ENTRE",
- "1,3-Dichloropropene (brand name of fumigant) FUMIGANT BUFFER ZONE", and
- Contact information for the certified applicator in charge of the fumigation.

Buffer zone transit

If a buffer zone is required by the "1,3-Dichloropropene Field Fumigation Requirements, rev. January 1, 2026," incorporated by reference in 3 CCR section 6448(d), entry by non-handlers is prohibited during the buffer zone period. The only activities allowed within the buffer zone during the buffer zone period are fumigant handling and transit.
- Vehicular and bicycle traffic by non-handlers on public and private roadways through the buffer zone is permitted.
- The buffer zone must not include public or private roadways and rights-of-way where non-handlers may walk through the buffer zone during the buffer zone period.
- The buffer zone is not permitted to include bus stops or other locations where people may wait for public transit.

Entry into the application block

Entry into the application block (including early entry that would otherwise be permitted by the Worker Protection Standard or 3 CCR section 6770) by any person, other than a government official mandated to regulate pesticide use or a properly trained and equipped handler who is performing a handling task permitted by the product labeling, is prohibited from the start of the application until seven (7) days after the application is complete. This prohibition applies to all applications, including all tarp types and untarped applications.

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Recommended Permit Conditions for All Application Methods, Continued

Tarp perforation and removal	Tarps that do not meet the requirements for any percentage reduction in buffer zone distance mentioned on 1,3-D/chloropicrin labels, such as standard polyethylene tarps, may be perforated and/or removed according to fumigant labeling directions. Totally impermeable film (TIF) tarps approved by DPR for 1,3-D, according to 3 CCR section 6448.1, must not be perforated until a minimum of 10 days (240 hours) have elapsed after the application is complete, and must not be removed until a minimum of one (1) day (24 hours) after perforation, unless a weather condition exists that necessitates early tarp perforation or removal as specified by the fumigant label.

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Section J.3
Guidance for 1,3-D Enforcement

Disclaimer

This section is a summary of existing legal requirements for pesticide applications and provides guidance to CACs, their staff, and industry on requirements of the labeling of products which contain 1,3-D and the 1,3-D regulations adopted by DPR in 3 CCR sections 6448 through 6448.2, as well as examples of use scenarios. This guidance is not intended by DPR to be independently enforceable.

Buffer zone and setback terminology; usage with 1,3-D products

A "buffer zone" is an area that surrounds a pesticide application block in which certain activities are restricted for a specified period of time to protect human health and safety from existing or potential adverse effects associated with a pesticide application.

A "setback" is a distance which separates sensitive sites from the application block. For 1,3-D, setbacks are used to increase the distance between non-occupational bystanders and applications.

In certain situations, the labeling of products which contain 1,3-D prohibit use within 100 feet of an occupied structure, such as a school, hospital, business or residence, or require the structure to be vacant for the seven consecutive days following application. While the labels refer to this as a "buffer zone", in practice it is a "setback" as used above.

3 CCR section 6448(b) requires the application block be "setback" from structures that will be, or may be, occupied at any time during the seven days following the application, unless the structure is vacated during the entire setback period. The setback distances range from 100 feet to 500 feet based on the application rate and acreage treated.

3 CCR section 6448(d) requires a 100-foot buffer zone around application blocks based on application method and crop to be grown following application. For those applications where buffer zones are required, the buffer zone expires 48 hours after the application is complete.

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Guidance for 1,3-D Enforcement, Continued

Responsibility of the certified applicator to submit agreements with the NOI

Agricultural use restricted material permits are issued in the name of the operator of the property. (3 CCR section 6420(a)) The NOI is part of the permit. The permittee is responsible for assuring the NOI is submitted to the CAC's office. Others may submit the NOI on the property operator's behalf, but responsibility cannot be transferred. (see 3 CCR section 6434)

3 CCR section 6448(b)(1) requires the certified applicator to submit setback vacating agreements with each NOI.

3 CCR section 6448(d)(1) requires the certified applicator to submit, with each NOI, a copy of any written agreements from adjacent property operators that they, their employees, residents, and other persons will stay out of the buffer zone, while it is in effect.

The intent with these requirements is to provide a mechanism to allow the CAC to verify compliance when reviewing the NOI.

Based on local conditions, the CAC may adopt permit conditions with alternative methods for the certified applicator to meet the requirements of section 6448(b)(1) and (d)(1). This could include requiring agreements to be submitted with the 1,3-D permit application or allowing the agreements to be submitted alongside the NOI via either email, fax, or hand delivery.

Buffer zones for combination products or applications

The labeling of products which contain chloropicrin require a buffer zone and require the buffer zone to be posted. The recommended permit conditions require the 1,3-D buffer zone to be posted.

For products which include 1,3-D and chloropicrin, or for simultaneous applications of 1,3-D and chloropicrin, calculate both 1) the label-required chloropicrin buffer zone and 2) the 1,3-D buffer zone required under 3 CCR section 6448(d).

The buffer zone period and buffer zone posting requirements in the recommended 1,3-D permit conditions are intended to be aligned with the similar requirements of products which contain chloropicrin. The certified applicator is responsible to post signs along the perimeter of the more stringent (i.e., larger) buffer zone.

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Guidance for 1,3-D Enforcement, Continued

If setbacks or 1,3-D buffer zones "overlap"

If the setbacks for two or more applications overlap, under 3 CCR section 6448(c) the setback for both application blocks is based on the combined acreage, the highest application rate, and the fumigation method with the largest setback. See example below on how to calculate the setback.

DPR developed the 1,3-D buffer zones required under 3 CCR section 6448(d) to account for multiple applications. Thus, if the buffer zone for two or more applications overlap no additional mitigation is necessary at this time.

Approved tarpaulins

3 CCR section 6448.1 requires DPR to maintain a "List of Approved Totally Impermeable Film (TIF) Tarpaulins" on its website. The List is available at <https://www.cdpr.ca.gov/environmental-monitoring/air-monitoring/>. Click on, or scroll to, "1,3-Dichloropropene Field Fumigation Requirements" and click on the Approved Tarpaulin List.

Soil moisture requirements

3 CCR section 6448.2(b) specifies that an application block must have a soil moisture of at least 50 percent of field capacity at a depth of three to nine inches below the surface when the fumigation occurs, except for drip applications. "1,3-Dichloropropene Field Fumigation Requirements, est. January 1, 2026," provides three options to check soil moisture requirements. Option 1 (Irrigation) is the easiest to implement but should only be used for very dry soils. Option 2 (Feel and Appearance) is most similar to the current label soil moisture method but has some subjectivity associated with determining soil moisture level based on an evaluation of soil texture. Option 3 (Soil Moisture Sensor) is more accurate than Option 1 and Option 2, but it is the most complex, expensive, and time consuming.

The CAC has discretion to require the use of a specific soil moisture option based on local conditions.

CACs can consult with their DPR Regional Office for soil moisture training information and availability of a soil moisture sensor specified by Option 3.

The CAC should consider requiring recordkeeping for soil moisture as part of permit conditions until the U.S. Environmental Protection Agency finalizes the draft label changes for 1,3-D products that require fumigation management plans (FMPs), including recordkeeping for soil moisture.

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Guidance for 1,3-D Enforcement, Continued

Field Fumigation Methods

3 CCR section 6448.2(d) specifies that 1,3-D fumigations must be made using only the methods specified in "1,3-Dichloropropene Field Fumigation Requirements, rev. January 1, 2026," and it specifies several new methods with new field fumigation method (FFM) codes. Methods not specified are no longer allowed (FFM code 1290).

Notice of intent (NOI)

In addition to the information required in 3 CCR section 6434, the following information should be included on the NOI to aid in documenting the applicable buffer zone requirements:

1. The crop to be planted following the fumigation.
2. Whether a buffer zone is required by the "1,3-Dichloropropene Field Fumigation Requirements, rev. January 1, 2026" document, incorporated by reference into 3 CCR section 6448(d).

1,3-D use reporting

3 CCR section 6626(g)(1) requires 1,3-D use reports to be submitted electronically in a manner specified by the Commissioner. Commissioners should specify to submit use-reports through Telus.

Example setbacks for overlapping applications

The following is an example for determining setbacks for overlapping applications as specified in 3 CCR section 6448(c).

Field 1 Application Block: Fumigation method 1206 (Table 1, Field Fumigation Requirements document), untarped, 18-inch injection

- 10 acres
- 300 lbs./ac application rate
- Fumigation starts on October 31 at 7:00 am and ends at 11:00 am
- 200 ft setback (Table 3a)

Field 2 Application Block: Fumigation method 1224 (Table 1, Field Fumigation Requirements document), untarped, 24-inch injection

- 5 acres
- 332 lbs./ac application rate
- Fumigation starts on November 2, 8:00 am
- 100 ft setback (Table 5b, Field Fumigation Requirements document)

The applications for Blocks 1 and 2 overlap if they are separated by 300 ft (200 ft + 100 ft) or less AND the fumigation for Block 2 starts on November 1 at 11:00 pm (October 31, 11:00 am + 36 hrs.) or earlier.

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Guidance for 1,3-D Enforcement, Continued

Example setbacks for overlapping applications, (continued)

If Blocks 1 and 2 overlap, for both blocks the setback distance from occupied structures is 500 ft, determined from:

- 15 acres from Block 1 + Block 2 combined
- 332 lbs./ac from Block 2, higher than Block 1
- Setback from Table 3a, Field Fumigation Requirements document (Block 1), larger than Table 5b, Field Fumigation Requirements document (Block 2)

If all overlapping application blocks use the same fumigation method and the same application rate, such as when a large field is broken up and fumigated sequentially over several days, the setback distance is determined using the combined acreage.

If an NOI for a 1,3-D application scheduled for a later date overlaps with a previous application, the NOI must be denied if the combined acreage exceeds the distance specified by the setback table or the earlier application cannot accommodate the changes caused by the later application (i.e., the combined acreage cannot comply with the setback distance and maximum acreage specified by the setback table).

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Guidance for 1,3-D Enforcement, Continued

1,3-Dichloropropene (With or Without Chloropicrin) Field Fumigation Methods Allowed from May 1 Through October 31, by Geographic Area

Note: From November through April, label methods allowed by section 6448.2 may be used anywhere in California. (Regulations and permit conditions that already restricted the use of fumigants still apply.)

Method Name	Regulation Subsection (3 CCR 6448.2)	Field Fumigation Method (FFM) Code	NAAs: Sacramento Metro & South Coast	NAAs: Southeast Desert, San Joaquin Valley & Ventura	Outside NAAs
Nontarpaulin/Shallow/Broadcast or Bed	(d)(1)	1201	✓		✓
Tarpaulin/Shallow/Broadcast	(d)(2)	1202	✓		✓
Tarpaulin/Shallow/Bed	(d)(2)	1203	✓		✓
Nontarpaulin/Shallow/Broadcast or Bed/Three water treatment	(d)(3)	1204	✓	✓	✓
Tarpaulin/Shallow/Bed/Three Water Treatments	(d)(4)	1205	✓		✓
Nontarpaulin/Deep/Broadcast	(d)(5)	1206	✓	✓	✓
Tarpaulin/Deep/Broadcast	(d)(6)	1207	✓	✓	✓
Tarpaulin/Deep/Bed	(d)(6)	1208	✓	✓	✓
Chemigation (Drip System)/Tarpaulin	(d)(7)	1209	✓		✓
Nontarpaulin/Deep/Strip	(d)(5)	1210	✓	✓	✓
Nontarpaulin/Deep/GPS targeted	(d)(5)	1211	✓	✓	✓
Nontarpaulin/24 inches Deep/Broadcast	(d)(5)	1224	✓	✓	✓
Tarpaulin/24 inches Deep/Broadcast	(d)(5)	1225	✓	✓	✓
Nontarpaulin/24 inches Deep/strip	(d)(5)	1226	✓	✓	✓
Nontarpaulin/Deep24 inches /GPS targeted	(d)(5)	1227	✓	✓	✓
Nontarpaulin/Tree-Hole	Interim Method	1230	✓	✓	✓
Tarpaulin/Shallow/Broadcast – with tarp eligible for 60% credit	(d)(2)	1242	✓	✓	✓
Tarpaulin/Shallow/Bed -- with tarp eligible for 60% credit	(d)(2)	1243	✓	✓	✓
Tarpaulin/Shallow/Bed/Three Water Treatments – with tarp eligible for 60% credit	(d)(4)	1245	✓	✓	✓
Tarpaulin/Deep/Broadcast – with tarp eligible for 60% credit	(d)(6)	1247	✓	✓	✓
Tarpaulin/Deep/Bed – with tarp eligible for 60% credit	(d)(6)	1248	✓	✓	✓
40% TIF tarp/18 inches deep/ broadcast	(d)(5)	1250	✓	✓	✓
Chemigation (Drip System)/Tarpaulin - with tarp eligible for 60% credit	(d)(7)	1259	✓	✓	✓
40% TIF tarp/24 inches deep/ broadcast	(d)(5)	1264	✓	✓	✓
Other label method		1290	**Methods not allowed in California year-round**		

NAA: nonattainment area; For a map of the NAAs see Compendium Volume 3 Appendix N *Volatile Organic Compounds*.

Section J.4
Interim Recommended Permit Conditions for the Nontarpaulin Tree-hole Fumigation Method

Background

Under the authority in 3 CCR section 6448.3, effective on September 3, 2024, DPR granted interim approval of this fumigation method for three years. DPR must pursue rulemaking to include this new method in regulation prior to the expiration of the interim approval. These permit conditions expire on the effective date of the regulation amendment adopting this method **or** three years from the effective date above, whichever is earlier.

Method description

This method applies to applications using a closed system application tube followed by soil compaction to close the tube channel. Other individual tree-hole fumigations with 1,3-Dichloropropene (1,3-D) are prohibited.

Conditions

- The application rate must not exceed the maximum allowed by the product label or two pounds of 1,3-D active ingredient per hole, whichever is less.
- The number of tree holes fumigated during a calendar year must not exceed 166 holes in any acre.
- The distance or spacing between fumigated tree holes must be at least 15 feet. Exception: If two or more adjacent tree holes are to be fumigated as a group and the spacing is less than 15 feet, at least 24 hours must elapse from the end of the fumigation of one tree hole to the start of fumigation of the adjacent tree hole.
- The tree-hole site must be prepared by backhoeing to break up restrictive soil layers that may retard fumigant movement. The backhoe site must be dug in the dimensions of at least 10 by 10 by 10 feet. The hole must then be backfilled. Soil moisture must meet the requirements specified in 3 CCR subsection 6448.2(b), after backfilling.
- 1,3-D must be applied using a closed-system application tube(s). A "closed system application tube" incorporates 1,3-D into soil, but does not allow any 1,3-D contact with the air throughout the entire fumigation. Nitrogen must be used to purge the system before application tube is lifted out of the ground at any time. After the application tube(s) are removed, the soil must be rolled or compacted to close the channel(s) created by the application tube(s).

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Interim Recommended Permit Conditions for the Nontarpaulin Tree-hole Fumigation Method , Continued

Conditions, (continued)

- The setback to occupied structures for each tree-hole fumigated is 100 feet for seven days. These tree-hole fumigations are exempted from the overlapping applications requirements. Follow the other applicable requirements specified in 3 CCR section 6448.The Notice of Intent (NOI) and pesticide use report must identify this tree-hole fumigation method using FFM code 1230.
- The NOI must indicate the number of tree holes that will be fumigated per acre and include a map of the site indicating the location where the tree hole(s) fumigation will take place.
- This method cannot be used with products containing a combination of 1,3-D and chloropicrin.