

INITIAL STATEMENT OF REASONS AND PUBLIC REPORT
DEPARTMENT OF PESTICIDE REGULATION

Title 3. California Code of Regulations
Amend Sections 6448, 6448.2, 6624, and 6626
Pertaining to 1,3-Dichloropropene Field Fumigation Method – Tree-hole Method

This is the Initial Statement of Reasons required by Government Code section 11346.2, and the public report specified in section 6110 of Title 3, California Code of Regulations (3 CCR). Section 6110 meets the requirements of Title 14, CCR section 15252, and Public Resources Code section 21080.5 pertaining to certified state regulatory programs under the California Environmental Quality Act.

SUMMARY OF PROPOSED ACTION/PESTICIDE REGULATORY PROGRAM ACTIVITIES AFFECTED

The Department of Pesticide Regulation (DPR) proposes to amend 3 CCR sections 6448, 6448.2, 6624, and 6626. The pesticide regulatory program activities affected by the proposal are those pertaining to restricted materials and pesticide use enforcement. In summary, the proposed action imposes specific conditions for tree planting and replanting sites and individual nontarpaulin/tree-hole applications.

The proposed tree-hole regulations will establish the following conditions:

- A maximum per hole application rate of 1.85 pounds of active ingredient (AI).
- The minimum distances between any two tree-hole planting sites must be 15 feet center to center. If trees are planted less than the 15-foot minimum, tree-hole applications must be separated by at least 24 hours.
- A maximum number of 60 tree-holes per acre in a calendar year.
- The minimum injection depth for fumigant is 36 inches.
- Tilling, soil, and application requirements.

DPR also proposes to amend existing document “1,3-Dichloropropene Field Fumigation Requirements, Rev. January 1, 2026,” which is incorporated by reference in existing sections 6448, 6448.2, 6624, and 6626, to reflect these changes. A copy of this document is included in the rulemaking file.

SPECIFIC PURPOSE, NECESSITY, AND FACTUAL BASIS

DPR protects human health and the environment by fostering sustainable pest management and regulating pesticides. DPR's strict oversight includes product evaluation and registration; statewide licensing of commercial and private pesticide applicators, pest control businesses, dealers, and advisers; environmental monitoring; and residue testing of fresh produce. This statutory scheme is set forth primarily in Food and Agricultural Code (FAC) Divisions 6 and 7.

Background on 1,3-Dichloropropene

1,3-Dichloropropene (1,3-D) was introduced in California in 1970 as a fumigant used to control nematodes, insects, and disease organisms in the soil. 1,3-D has major uses in California in fruit and nut trees, strawberries, grapes, carrots, and several other food and non-food crops. It is commonly used as a pre-plant treatment that is injected into the soil. It may also be applied through drip irrigation. Regardless of the application method, the offsite transport of this fumigant due to volatilization has the potential to result in human exposure through inhalation.

1,3-D is currently listed as a restricted material in 3 CCR section 6400(e). As a restricted material, the purchase and use of 1,3-D for agricultural production purposes are allowed only under a restricted materials permit from the local county agricultural commissioner (CAC). Before issuing a permit, the CAC must evaluate the permit application to determine whether the intended use may cause a substantial adverse environmental impact based on local conditions at the application site. Depending on the results of this review, the CAC may deny the permit or impose permit conditions including the use of specific mitigation measures. As part of the permit for any restricted material, applicators must provide a notice of intent to the CAC before any application. The notice of intent includes application-specific information, such as the number of acres being treated and the date the application is intended to commence.

1,3-D is listed as a toxic air contaminant (TAC) in 3 CCR section 6860(b) based on its designation as a hazardous air pollutant under the federal Clean Air Act. DPR has been managing the use of 1,3-D as a TAC in order to protect human health since 1990. In 2013, Food and Agricultural Code (FAC) sections 14023 and 14024 were amended to apply to pesticides that, like 1,3-D, are both TACs and hazardous air pollutants (HAP-TACs). Control or mitigation measures that DPR develops for HAP-TACs must also follow the requirements specified by FAC section 14024, including consulting with the California Air Resources Board (CARB), the Office of Environmental Health Hazard Assessment (OEHHA), and air pollution control or air quality management districts in affected counties. DPR also consults with the California Department of Food and Agriculture (CDFA) on proposed TAC mitigation measures.

In 2023, DPR adopted regulations, which became effective on January 1, 2024, to restrict the use of 1,3-D to mitigate potential acute and cancer risk to residential/non-occupational bystanders. The regulations established mandatory setbacks; set limits on the application rate and acres treated for individual field soil fumigations; placed restrictions on multiple field soil fumigations that do not meet distance or time separation criteria; limited the allowed methods to apply 1,3-D, including establishing criteria for acceptable types of tarpaulins that can be used; required an annual report from DPR that includes evaluations for 1,3-D use and air monitoring results; required the inclusion of certain information in existing pesticide use records and pesticide use reports; and allowed for the interim approval of new fumigation methods as long as certain criteria were met. On September 3, 2024, DPR granted approval to the Tehama County Agricultural Commissioner's request for interim use of nontarpaulin/tree-hole fumigation method, with certain restrictions, for three years, and the method was assigned field fumigation method (FFM) code 1230 for tracking purposes.

In 2025, DPR adopted regulations which became effective on January 1, 2026, to restrict the use of 1,3-D to address potential cancer risks to occupational bystanders. DPR developed the regulations, which established buffer zones and required ongoing evaluation of potential exposure risks, jointly and mutually with OEHHA.

1,3-D is also a volatile organic compound (VOC) and contributes to the formation of ozone, a major air pollutant in several regions of California. Under the federal Clean Air Act, California's State Implementation Plan for ozone includes an element to track and reduce VOC emissions from pesticides. In 2008, DPR adopted regulations (3 CCR sections 6447.3, 6448-6452.3) to control VOC emissions from fumigants during the May–October peak ozone season in five regions that do not comply with the federal air quality standard for ozone (nonattainment areas, (NAAs)): Sacramento Metro, San Joaquin Valley, Southeast Desert, South Coast, and Ventura. Both the residential/non-occupational bystander and VOC regulations only allow fumigation methods for which DPR has adequate data to determine health mitigation measures and VOC emission rates. However, the regulations include provisions for interim approval of new fumigation methods, provided the methods meet certain criteria (3 CCR sections 6448.3 and 6452).

Background on Tree-hole Fumigation

Certain product labels for 1,3-D allow for a specialized type of application known as a “tree-hole” or “tree planting site” application (henceforth referred to as “tree-hole” fumigations). Such applications are typically used in orchard replant scenarios where dead or diseased trees must be selectively removed and replaced. Whereas most 1,3-D applications for tree planting purposes involve the tillage and application of 1,3-D throughout an entire field via shank injection to a depth of 18 to 24 inches, tree-hole applications are akin to a spot treatment whereby applications are performed individually or in isolated clusters within an existing orchard using a hand-held probe or injection auger, with automated tractor-mounted tools also recently becoming available. Soil is first prepared by excavating a 10-foot-deep hole measuring 10-by-10 feet wide using a backhoe, and the hole is then backfilled. Fumigant is injected near the center of the hole to depths greater than a typical field fumigation, varying from 36 to 60 inches below the soil surface. Following application, the soil surface is rolled and compacted, and any shank trace disrupted.

Prior to January 1, 2024, tree-hole applications were not considered field soil fumigations and were exempt from the requirements now described in 3 CCR section 6448.2. Modifications to 3 CCR section 6448.2(d) adopted as a component of rulemaking DPR 22-005 (OAL File No. 23-1107-02S) specify that applications of 1,3-D are only allowed if they have been assigned a field fumigation method code as specified in DPR's 1,3-D Field Fumigation Requirements, a document incorporated by reference. While tree-hole applications have long been allowed by product labels and used within California, no specific field fumigation code previously existed for their reporting and uses were reported under a broad “Other Application Method” code which is now prohibited. Hence, following adoption of the modifications of 3 CCR section 6448, the tree-hole method was disallowed. Following a formal request from the Tehama County Agricultural Commissioner (CAC), DPR granted a three-year interim approval for this method on September 3, 2024, pursuant to 3 CCR sections 6448.3 and 6452, with continued use beyond its expiration in September 2027 requiring further regulatory action. DPR is therefore proposing to make permanent most of the requirements of the interim approval of the individual tree-hole method, with additional restrictions that go beyond the interim-approved application method to limit emissions to be comparable to existing low-emission application methods of 1,3-D, pursuant to section 6448.3.

Tree-hole fumigations are fundamentally different from other 1,3-D application methods, which otherwise treat the entirety of a field or alternate between treated and untreated rows. Because tree-hole applications are performed on a per-hole basis, there can be extensive variation in the broadcast equivalent per acre depending on the number of tree-holes fumigated: a single 10-by-10 foot tree-hole uses a maximum of 1.85 pounds of 1,3-D active ingredient, which hypothetically translates to an application rate exceeding 800 lb/ac if every square foot of an application block were treated, far exceeding the 332 lb/ac maximum for broadcast applications. As a result, DPR's interim approval placed restrictions on use of the tree-hole fumigation method, such as a limit of 166 holes per acre per year (approximately matching the 332 lb/ac maximum rate for broadcast applications), minimum spacing between neighboring tree holes of at least 15 feet, requirements to prepare the site prior to application, soil moisture requirements, and a requirement to use closed-system application tube(s), among others.

Since the interim approval took effect, DPR has obtained detailed usage data on the tree-hole application method based on the requirement to report tree-hole application information to DPR's Pesticide Use Reporting (PUR) system with a unique FFM code (FFM 1230). This data has allowed DPR to better understand the usage patterns of the tree-hole method to an extent that was not possible prior to 2024, when such applications were not uniquely identifiable within the PUR database.

Based on existing data and recently collected use information, DPR is proposing to make permanent most of the provisions described in the interim approval for the individual tree-hole method, with additional restrictions placed on the fumigation method to limit emissions to be comparable to existing low-emission application methods of 1,3-D, pursuant to section 6448.3.

Data in Support of the Regulation

3 CCR sections 6448.3(a) and 6452(c) specify the following criteria for DPR to evaluate new 1,3-D fumigation methods:

- The fumigation method has scientific data and information sufficient to estimate 1,3-D emissions;
- The results are valid as indicated by the quality control data; and
- The conditions studied represent agricultural fields fumigated.

3 CCR section 6448.3(b) also requires DPR to estimate potential 1,3-D air concentrations using the emissions data to:

- Determine the combinations of setback distance, application rate, and application block size that will result in a 1,3-D air concentration of no more than 55 parts per billion as a 72-hour time-weighted average;
- Assign a FFM code.

As with the other 1,3-D fumigation methods, DPR has sufficient data to estimate emissions from the tree-hole fumigation method using the HYDRUS computer model and available soil characteristics data for agricultural fields, and the results are valid as indicated by the quality control data.

For fumigants like 1,3-D, exposure can occur through inhalation due to the off-site movement of pesticides from treated fields into the ambient air. The level of potential inhalation exposure depends on the fumigant emissions from the treated soil to the air, the distance between these emissions and the bystander, and the weather conditions at the time of the emissions. Existing regulations incorporate a range of mitigation measures to address the risks associated with 1,3-D, including low-emission fumigation methods, enhanced soil moisture levels, extended tarp cutting times, limited application block size and rates, buffer zones, and the use of setbacks from occupied structures.

DPR uses the HYDRUS computer model to estimate emissions from tree-hole fumigations of 1,3-D from soil to the atmosphere. The HYDRUS model can estimate 1,3-D emissions based on its chemical properties (e.g., soil adsorption), characteristics of the soils where field soil fumigations occur (e.g., water content), and characteristics of methods of application (e.g., depth of fumigant injection below the soil surface). Validation work and external peer review have subsequently shown that the HYDRUS model produces flux estimates comparable to those reported across a range of field studies and has additionally indicated that HYDRUS can accurately simulate the fundamental processes of heat, water, and solute transport throughout the soil profile, increasing confidence in the ability of the model to simulate flux under new scenarios (Kandelous 2019). HYDRUS estimates the 1,3-D emissions as a rate (e.g., pounds volatilized per hour per acre) and shows how the emission rate changes over time. HYDRUS also estimates the cumulative emissions over a specified period of time. Brown (2019) described the methodology used for estimation of 1,3-D emissions, which was peer-reviewed (DPR 2019). The modeling approach was later updated using the same methodology but incorporated additional data collected in the time since the previous analysis (Brown 2022).

The methods of Brown (2022) were used to develop emissions estimates for a 36-inch deep tree-hole injection, which was used to support the interim approval for the tree-hole method (Brown 2024, Henderson 2024). This represents the minimum injection depth for tree-hole applications, which may occur between 36- and 60-inch depths according to label language, and is therefore expected to represent the higher-emission scenario. Emissions were modeled using the physicochemical properties of 1,3-D and soil characteristics from 21 representative agricultural soils sampled just prior to fumigation. The 21 fields included eight soil texture classes from three coastal counties and six inland counties, which represent the range of soil conditions for 1,3-D fumigations in California. Output includes the peak 72-hour emission value, which DPR uses to determine setback distances for mitigation of acute exposure, and the emission rating, which is used to quantify the total emissions from an application as a proportion of the amount applied.

The results of the simulations, described by Brown (2024), provided the data required under 3 CCR section 6448.3 for the evaluation of new fumigation methods and followed an approach consistent with the framework previously used by DPR for evaluation of lower-emission application methods, for example, through the introduction of deeper broadcast injection methods.

Table 1. Comparison of emissions for the nontarpaulin/tree-hole method vs. TIF/broadcast method (1242).

Emissions	Nontarpaulin/ Tree-hole Method	TIF Broadcast Method (FFM 1242)
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Peak 72-hr emissions with 100 lb/ac application rate	1.49 $\mu\text{g}/\text{m}^2\text{-sec}$	2.00 $\mu\text{g}/\text{m}^2\text{-sec}$
Total emissions for 21 days as percent of amount applied (VOC emission rating)	10%	11%

Table 1 shows the emissions DPR has estimated using HYDRUS for this tree-hole fumigation method and how it compares to FFM 1242, a shallow injection broadcast application method utilizing totally impermeable film (TIF). DPR's analysis demonstrates that the emission estimates for the nontarpaulin/tree-hole method are lower than FFM 1242 on a pound-for-pound basis using the label minimum injection depth of at least 36 inches. FFM 1242 serves as a standard "low emission" reference method under DPR's residential bystander regulation, where it is subject to minimum setback restrictions (DPR 2026a), as well as for the occupational bystander regulations, where it was assumed that any combination of controls that result in similar or lower near-field annual average air concentration levels as those for TIF tarp FFMs 1242 and 1243 for crops other than trees and grapes would be associated with risks at acceptable levels (Edwards 2024). Because emissions from the tree-hole method are lower than FFM 1242, DPR's modeled air concentrations for FFM 1242 may be conservatively applied to estimate near-field air concentrations for the tree-hole method under different combinations of setback distance, application rate, and application block size. Uses of FFM 1242 at average application rates of 120 lbs AI/acre or less are exempt from buffer zone requirements under DPR's occupational bystanders' regulations (DPR 2026a, Edwards 2024).

DPR's analysis suggests that there are practical limitations to the usage of tree-hole applications at a large scale, including the number of plantings per orchard and the relative cost of the tree-hole application method relative to alternatives (such as broadcast treatments). PUR analysis shows that over 99% of tree-hole applications occurred on walnut orchards, where typical orchard spacing allows for, at most, the planting of between 56-75 trees per acre (Fruit & Nut Research & Information Center, 2022), placing an upper limit on the number of tree-hole applications per acre well below the 166 holes/acre authorized by the interim approval.

Based on emissions data, usage information, and the practical limitations of the tree-hole method described previously, DPR proposes to restrict tree-hole applications to no more than 60 tree-holes per acre per year, equating to an upper broadcast-equivalent application rate limit of 111 lbs AI/ac. This value is determined by multiplying the per hole maximum application rate (1.85 lbs AI/hole) by the total number of allowed tree-holes per acre (60), yielding a 111 lbs AI/ac broadcast-equivalent application rate. DPR considers broadcast-type applications as an equally effective but more practical alternative for orchard soil fumigation beyond this threshold. Because this proposed limit falls within the 120 lbs AI/ac threshold discussed previously, tree-hole applications would be exempt from buffer zone requirements. Adoption of the tree-hole method is necessary to allow growers to continue using a lower emission field fumigation method.

If adopted, DPR will assign a FFM code of "1230" to the tree-hole method, continuing the coding used during the interim approval. This coding will allow use of the tree-hole method to be tracked and evaluated alongside other 1,3-D fumigation methods on a permanent basis.

Proposed Regulations

Amend 3 CCR Section 6448. 1,3-Dichloropropene Field Fumigation – General Requirements.

DPR proposes to amend throughout this section, the date of the document incorporated by reference, “1,3-Dichloropropene Field Fumigation Requirements,” to reflect a revision date of September 1, 2027.

Amend 3 CCR Section 6448.2. 1,3-Dichloropropene Field Fumigation Methods.

Section 6448.3 specifies a process for DPR to evaluate and provide interim approval of new 1,3-D fumigation methods if the method meets specified criteria. On September 3, 2024, DPR published a notice of interim approval for a new method to fumigate individual tree-holes. As specified by section 6448.3(c), the interim approval expires on September 4, 2027. To allow this fumigation method on a permanent basis, DPR proposes to add this method to section 6448.2(d), which currently outlines allowed 1,3-D fumigation methods and their requirements. Proposed subsection 6448.2(d)(8) will specify requirements for applications of 1,3-D to individual tree-hole or tree-planting sites. The requirements include:

- Restrictions on the amount of 1,3-D that can be applied per hole, number of tree-holes fumigated per acre during a calendar year, and distance between fumigated tree-holes;
- tree-hole site preparation requirements including use of a backhoe to break up restrictive soil layers that may retard fumigant movement, site excavation dimensions, backfilling the site, and soil moisture requirements after backfilling; and
- required use of closed-system application tubes during application and soil rolling or compaction following tube removal to close the channels created by the tubes.

The requirements proposed in subsections (d)(8)(A)-(d)(8)(D) follow from the analysis described in Brown (2024) and are necessary to ensure that emissions from tree-hole applications are no greater than those of a low-emission reference method (FFM 1242) at the average rate for a non-tree-and-grape crop on a per-acre basis. Subsections (d)(8)(E)-(d)(8)(G) formalize product label recommendations for tree-hole application into a legally enforceable requirement, and are further necessary to ensure that applications are performed in a way consistent with the underlying assumptions of DPR’s emissions modeling and estimates of potential non-occupational bystander exposure.

Subsection (d)(8) is to be titled “Individual tree-hole (also known as a tree planting site).” The term “tree planting site” is used on product labels for tree-hole applications and is included here to align regulatory language with the label nomenclature. However, because the term “site” could be interpreted to refer to an area larger than an individual tree-hole, the title clarifies that a tree planting site and an individual tree-hole application are synonymous for the purposes of the regulation described here.

Additionally, throughout this section, DPR proposes to amend the date of the document incorporated by reference, “1,3-Dichloropropene Field Fumigation Requirements,” to reflect a revision date of September 1, 2027.

Amend 3 CCR Section 6624. Pesticide Use Records

In subsection 6624(c)(8), DPR proposes to amend the date of the document incorporated by reference, “1,3-Dichloropropene Field Fumigation Requirements,” to reflect a revision date of September 1, 2027.

Amend 3 CCR Section 6626. Pesticide Use Reports for Production Agriculture.

In section 6626(g), DPR proposes to amend the date of the document incorporated by reference, “1,3-Dichloropropene Field Fumigation Requirements,” to reflect a revision date of September 1, 2027.

Document Incorporated By Reference: 1,3-Dichloropropene Field Fumigation Requirements, Rev. September 1, 2027

This document, incorporated by reference in sections 6448, 6448.2, 6624, and 6626, is being revised to 1) update the revision date to September 1, 2027, the implementation date for the proposed regulations, and make non-substantive changes correcting “Web site” with “website” in the introductory language for table 6; 2) add nontarpaulin/tree-hole method to the descriptions of allowed fumigation methods; 3) amend setback table section and caption text to include the “Nontarpaulin/tree-hole” method; 4) revise the table of contents to reflect the addition of the “Nontarpaulin/tree-hole” method to Table 6; and 5) amend buffer zone Table 10 to include the “Nontarpaulin/tree-hole” method in the existing FFM 1242 buffer zone grouping, with footnote language excluding tree-hole applications from the buffer zone requirements otherwise required for 1,3-D applications to tree crops, as a result of emissions from the method on a per-acre basis being no greater than those of the low-emission reference method (FFM 1242) at the average application rate for a non-tree-and-grape crop, and therefore meeting the health criteria for non-occupational regulations.

Existing Section 2 expands on fumigation method requirements in subsection 6448.2. To align with the proposed addition of section 6448.2(d)(8), DPR proposes to amend Table 1 to add the nontarpaulin/tree-hole method, along with an assigned FFM code and references to regulation subsections and setback tables. The assigned FFM code is a more specific and easier-to-use identifier of fumigation method than the regulation text subsection. The FFM code is used to identify the fumigation method for notices of intent, pesticide use reports, and other regulatory purposes. Existing Section 3 also expands on the fumigation method requirements in subsection 6448.2(d) and includes descriptions of allowed fumigation methods and specifies allowed combinations of fumigation method, season, maximum application rate, maximum application block size, and minimum setback distance that achieve the regulatory target concentration of 55 ppb as a 72-hour average. Similar to the amendment in Section 2, to align with the proposed addition of section 6448.2(d)(8), DPR proposes to amend Table 6 by adding the FFM code for nontarpaulin/tree-hole method and update the title of Table 6 to “Tree-hole and Totally Impermeable Film (TIF) tarpaulin methods with minimum restrictions:” for consistency with proposed changes.

CONSULTATION WITH OTHER AGENCIES

DPR formed a TAC workgroup to comply with the consultation required by FAC section 14024. In addition to CACASA and the Air Pollution Control Districts required by FAC section 14024, the TAC workgroup included representatives from CARB and OEHHA. The TAC workgroup also included a representative of CDFA to fulfill the consultation specified in FAC section 11454, and January 15, 2019, Memorandum of Understanding developed pursuant to FAC section 11454.2. In compliance with FAC section 14024, the TAC workgroup provides comments on the draft regulation text and related documents (DPR, 2026b).

DPR also consulted with the Agricultural Pest Control Advisory Committee, as required by FAC section 12047, on December 9, 2026 (DPR, 2026c), and the Pesticide Registration and Evaluation Committee on November 20, 2026 (DPR, 2026d).

As stated above, DPR's proposed regulations will address both acute and cancer risks to non-occupational/residential bystanders from the use of 1,3-D in tree-hole applications. OEHHA agrees that since DPR's proposed regulations are not intended to address risks to occupational bystanders, and only are intended to address risks to non-occupational/residential bystanders, the proposed regulations are not subject to joint and mutual development process set forth in FAC sections 12980 and 12981 (Bailey, 2026; Edwards, 2026).

ALTERNATIVES TO THE PROPOSED REGULATORY ACTION PURSUANT TO GOVERNMENT CODE SECTION 11346.2(b)(4)

DPR has not identified any feasible alternatives to the proposed regulatory action that would achieve the purpose of the regulation with less possible adverse economic impacts, including any impacts on small businesses, and invites the submission of suggested alternatives. The proposed regulations will make permanent the interim approval of the tree-hole injection method including use in orchard replant scenarios where dead or diseased trees must be replaced, with additional restrictions on the method to limit emissions below that of existing low-emission application methods of 1,3-D.

EVIDENCE SUPPORTING NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS PURSUANT TO GOVERNMENT CODE SECTION 11346.2(b)(5)(A)

The proposed regulations will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. The proposed regulation will allow for continued use of the tree-hole injection method, which is currently allowed via the interim approval process, and which was previously allowed without restriction statewide prior to the implementation of 1,3-D non-occupational/residential bystander regulations in January 2024. New provisions of the regulation formalize existing best management practices recommended by 1,3-D product label language. In their economic impact analysis, CDFA found no pest management or business costs associated with the proposed regulation, but noted failure to adopt the text (and hence allowing the interim approval to lapse) would be associated with costs to growers to comply with buffer zone requirements or lost yields (Ganjisaffar et al. 2026).

ECONOMIC IMPACT ASSESSMENT PURSUANT TO GOVERNMENT CODE SECTION 11346.3(b)

Creation or Elimination of Jobs within the State of California: The proposed action will not likely create or eliminate jobs within California. DPR proposes to establish restrictions on tree-hole or tree planting application methods, and the proposed requirements are similar to current and past requirements. These changes will not lead to the creation or elimination of jobs within California.

Creation of New Businesses or the Elimination of Existing Businesses within the State of California: The proposed action would not create new businesses or eliminate existing businesses currently doing business within the State of California. The proposed regulations require minimal changes in processes, services, and equipment for compliance, and the changes can easily be achieved by existing businesses. Therefore, the proposed regulations will not lead to the creation or elimination of existing businesses within California.

The Expansion of Businesses Currently Doing Business within the State of California: The proposed action will not likely result in an expansion of businesses currently doing business within the State of California. The proposed regulation requires minimal changes in processes, services, and equipment for compliance, and the changes can easily be achieved by existing businesses. Therefore, the proposed regulations will not lead to expansion of businesses within California.

The Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment: The proposed regulation will continue to give growers the option of a low-emission tree-hole fumigation method that may be used in tree replant situations. This enables growers to remove dead and/or diseased trees from orchards and use target “spot” treatments of 1,3-D prior to replanting, which may help extend the productive life of the orchard and delay large-scale orchard fumigation and replacement, thereby increasing the interval between broadcast or strip fumigations that are associated with greater emissions of 1,3-D. With the proposed limits on treated tree-holes per acre, this approach will utilize lower amounts of 1,3-D on a per-acre basis than are used in broadcast or strip orchard replant scenarios. The injection depth for the method, which varies between 36-60 inches below the soil surface, is estimated to emit proportionally less 1,3-D pound-for-pound than the dominant methods used in large-scale orchard replant scenarios. Hence, the proposed action is expected to reduce the overall impact of orchard fumigations on air quality as compared to a situation where the method is no longer allowed.

IDENTIFICATION OF ANY SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECT THAT CAN REASONABLY BE EXPECTED TO OCCUR FROM IMPLEMENTING THE PROPOSAL PURSUANT TO CALIFORNIA CODE OF REGULATIONS, TITLE 3, SECTION 6110

The Secretary of Natural Resources determined that DPR’s pesticide regulatory program, including the adoption, amendment, and repeal of pesticide regulations, qualifies as a certified regulatory program under Public Resources Code section 21080.5 and 14 CCR section 15251(i). This determination means DPR’s pesticide regulatory program is functionally equivalent to the California Environmental Quality Act’s (CEQA) requirements for preparing environmental impact reports (EIRs), negative declarations, and initial studies, and is therefore exempt from such

requirements. This initial statement of reasons serves as the public report required under 3 CCR section 6110 and satisfies the requirements of DPR's CEQA certified regulatory program for rulemakings at 3 CCR section 6110-6116.

DPR's public report, as the substitute document satisfying CEQA functional equivalency requirements, must include a description of the proposed activity, and either (A) alternatives to the activity and mitigation measures to avoid or reduce any significant effects that the project might have on the environment, or (B) a statement that DPR's review of the project showed that the project would not have any significant effects on the environment and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment (3 CCR section 6110). DPR shall not adopt a regulation that would cause a significant adverse environmental impact if there is a feasible alternative or mitigation measure that would substantially lessen those significant adverse environmental impacts (3 CCR section 6116).

Under existing law, any pesticide sold or used in California must first be registered by U.S. EPA and also registered with DPR (7 U.S.C. section 136a(a); FAC section 12815 and 12993). DPR must conduct a thorough and timely evaluation before a pesticide is registered to ensure, among other things, that the pesticide does not have significant adverse environmental effects for which there are no feasible mitigation available, the use is not more detrimental to the environment than the benefit, and there are no reasonable, effective, and practicable alternatives that are demonstrably less destructive to the environment (FAC section 12824, 12825). Once registered, a pesticide may only be used in compliance with the approved label, applicable regulations, and any additional restrictions imposed by DPR or CAC related to the use of that pesticide (FAC section 12973). The pesticide product label and applicable regulations include use restrictions that are designed to address potential adverse impacts to human health and the environment (3 CCR section 6254).

1,3-D is currently listed as a restricted material in 3 CCR section 6400(e) and thus may only be purchased and used for agricultural production purposes under a restricted materials permit from the local CAC. Before issuing a permit, the CAC must evaluate the permit application to determine whether the intended use may cause a substantial adverse environmental impact based on local conditions at the application site. Depending on the results of this review, the CAC may deny the permit or impose permit conditions including the use of specific mitigation measures. (3 CCR section 6432.) As part of the permit for any restricted material, applicators must provide a notice of intent to the CAC at least 24 hours before any application. The notice of intent includes application-specific information, such as the number of acres being treated and date the application is intended to commence. (3 CCR section 6434.) After registration, if DPR receives a report of adverse effects, DPR must also investigate and if appropriate, reevaluate a pesticide that DPR's investigation finds may have caused or is likely to cause a significant adverse impact (3 CCR section 6220). In addition, DPR carries out an orderly program for the continuous evaluation of all registered pesticides (FAC section 12824).

In September 2024, pursuant to the authority contained in 3 CCR sections 6448.3(c) and 6452, DPR granted a three-year interim approval for the nontarpaulin/tree-hole fumigation method, with continued use beyond its expiration in September 2027 requiring further regulatory action. As part of the interim approval, a limit of 166 holes per acre per year was placed on the method,

approximately matching the 332 lb/ac maximum rate for broadcast applications, along with several other restrictions.

DPR's proposed regulations are not reasonably expected to cause a significant adverse effect on human health; flora (plants); fauna (fish and wildlife); water; or air. To the contrary, DPR is placing additional and more stringent restrictions on the use of 1,3-D for tree-hole fumigations than are currently in place in the interim approval. First, based on DPR's analysis of the usage data collected during the interim approval period, DPR estimates that the interim approval for up to 166 tree-hole injections per acre was not indicative of actual use patterns. As a result, DPR is proposing to reduce the maximum number of possible tree-hole injections per acre per year from 166 to 60. DPR is also formalizing pesticide label recommendations for tree-hole applications as legally enforceable requirements. These requirements are necessary to ensure that emissions from tree-hole applications are no greater than those of a low-emission reference method (FFM 1242) at the average rate for a non-tree-and-grape crop on a per-acre basis. As a result, DPR's proposed regulations reduce maximum use for tree-hole fumigations, which similarly limits potential emissions and non-occupational bystander exposure to 1,3-D, offering greater protection compared to currently allowed uses in California.

Given the environmental and regulatory context, implementing the proposed regulations is not expected to result in any significant adverse effects to human health or the environment. Therefore, the proposed regulations qualify for categorical exemption from environmental review under 14 CCR section 15061(b)(3). Since no significant adverse effects are anticipated, no alternative measures or mitigation strategies are necessary to mitigate environmental impacts.

EFFORTS TO AVOID UNNECESSARY DUPLICATION WITH FEDERAL REGULATIONS

The proposed regulatory action does not duplicate or conflict with any regulations contained within the Code of Federal Regulations because there are no federal regulations that address this issue. Only the U.S. EPA-approved product labels address soil field fumigation use of 1,3-D.

DOCUMENTS RELIED UPON

1. Bailey, Leia. 2026. "Request for OEHHHA Agreement Regarding DPR's Development of a Regulation to Impose Specific Conditions for Tree Planting Sites and Individual Nontarpaulin/Tree-hole Applications of 1,3-D," Department of Pesticide Regulation letter, April 16, 2026.
2. Brown, Colin. 2019. "HYDRUS-simulated flux estimates of 1,3-dichloropropene maximum period-averaged flux and emission ratio for approved application methods," Department of Pesticide Regulation Report, October 17, 2019. https://www.cdpr.ca.gov/wp-content/uploads/2024/10/hydrus_simulated_flux_estimates_13d.pdf
3. Brown, Colin. 2022. "Updates to HYDRUS-simulated flux estimates of 1,3-dichloropropene maximum period-averaged flux and emission ratios," Department of Pesticide Regulation Report, September 22, 2022.
4. Brown, Colin. 2024. "Simulated flux estimates from tree-hole applications of 1,3-dichloropropene," Department of Pesticide Regulation Report, June 25, 2024.

5. DPR. 2019. “Responses to the External Peer Review of the Methodology to Develop a Township Cap for 1,3-Dichloropropene.” May 2019. Department of Pesticide Regulation
6. DPR, 2026a. “1,3-Dichloropropene Field Fumigation Requirements, Revised January 1, 2026,” Department of Pesticide Regulation document, January 1, 2026.
7. DPR, 2026b. “Review by the Toxic Air Contaminant Workgroup of Documents Related to the Draft 1,3-Dichloropropene Tree-hole Regulations,” Department of Pesticide Regulation document, August 12, 2026.
8. DPR, 2026c. “Agriculture Pest Control Advisory Committee (APCAC) Agenda,” Department of Pesticide Regulation document, December 09, 2026. <https://www.cdpr.ca.gov/event/12-09-2026-agricultural-pest-control-advisory-committee-apcac/>
9. DPR, 2026d. “Pesticide Registration and Evaluation Committee (PREC) Agenda,” Department of Pesticide Regulation document, November 20, 2026.
10. Edwards, David. 2024. “Update to the Health-Based Recommendations to Mitigate Cancer Risk of Occupational Bystander Exposure to 1,3-Dichloropropene,” Office of Environmental Hazard Assessment memorandum, June 11, 2024. <https://oehha.ca.gov/media/downloads/proposition-65/document/memo13-d07124pdf.pdf>
11. Edwards, David. 2026. “Agreement Regarding DPR’s Development of a Regulation to Impose Specific Conditions for Tree Planting Sites and Individual Nontarpaulin/Tree hole Applications of 1,3-D,” Office of Environmental Health Hazard Assessment memorandum, April 30, 2026.
12. Fruit & Nut Research & Information Center. 2022. Walnut orchard establishment. University of California, Davis. <https://fruitsandnuts.ucdavis.edu/walnut-orchard-establishment>
13. Ganjisaffar, F., Goodhue, R., & Mace, K. 2026. Economic impact of the adaption of 1,3-D tree-hole fumigation (FFM 1230). California Department of Food and Agriculture, April 30, 2026.
14. Henderson, J. 2024. “In the Matter of Tehama County and Nutrien, Ltd.,” Department of Pesticide Regulation Memorandum, August 27, 2024. https://www.cdpr.ca.gov/wp-content/uploads/2024/10/13-d_tree_hole_interim_approval_letter.pdf
15. Kandelous, Maziar. 2019. “A comparison between field-estimated and HYDRUS-simulated emission of 1,3-Dichloropropene from agricultural fields,” Department of Pesticide Regulation Report, October 17, 2019. https://www.cdpr.ca.gov/wp-content/uploads/2024/10/13d_hydrus_vs_field.pdf