



Monitoring of 1,3-Dichloropropene in Fresno and Merced Counties: Results for 2025

October 2026

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Disclaimer: On September 30, 2026, the California Department of Food and Agriculture's (CDFA) Center for Analytical Chemistry, the laboratory that conducts the analysis of DPR air monitoring samples, recalled and voided all 1,3-dichloropropene (1,3-D) results analyzed between October 24, 2025 and June 30, 2026. This decision impacts air monitoring samples collected by DPR beginning in early October 2025. CDFA determined the laboratory reference standard used to analyze 1,3-D (*cis*- and *trans*-isomers) samples significantly degraded.¹

Study 309 data that was analyzed prior to October 24, 2025, remains valid, has not been recalled, and can be accessed via DPR's Pesticide Air Monitoring Results Database. However, based on CDFA's data recall, data collected after October 7, 2025, through December 2025 were removed from this report. Reporting data we know is inaccurate or incomplete is misleading and can create confusion about potential health risks or the effectiveness of regulatory requirements. Therefore, this document will only report on the partial year of data collected for the annual report for 1,3-D.

Acknowledgments

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¹ <https://pressreleases.cdfa.ca.gov/Home/PressRelease/70078629>

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Introduction

The soil fumigant 1,3-dichloropropene (1,3-D) is one of the most widely used fumigants in California and is applied pre-plant to prevent soil-borne diseases. A portion of the applied chemical can disperse into the atmosphere depending on the fumigation method used during application as well as environmental conditions.

In 2016, the California Department of Pesticide Regulation (DPR) evaluated the reported 1,3-D pesticide use to identify and rank communities surrounded by the highest 1,3-D use. DPR prioritized regions outside the coverage area of DPR's Air Monitoring Network and the California Air Resources Board's (CARB) Toxic Air Contaminant programs. As a result, DPR selected two communities in the Central Valley: Delhi (Merced County) and Parlier (Fresno County). This monitoring study aims to identify the presence of ambient air concentrations of 1,3-D in regions of high use, compare measured air concentrations to acute regulatory targets (RTs) and sub-chronic and chronic human health screening levels (SLs), and evaluate the effectiveness of mitigation measures. Although we evaluate short-term exposure as a part of this project for comparison purposes, DPR emphasizes that this study is designed to evaluate long-term ambient air concentrations of 1,3-D in regions of higher use. Therefore, sampling, and analytical methods used for this study are specifically designed to achieve these goals. DPR staff began collecting weekly 24-h air samples to monitor 1,3-D in these two communities in November 2016.

On September 30, 2026, [DPR was notified](#) that, due to an issue with the laboratory standard, air monitoring sample results for 1,3-D analyzed between October 24, 2025 and June 20, 2026 were being recalled and voided by the laboratory, California Department of Food and Agriculture's (CDFA) Center for Analytical Chemistry. As a result, DPR does not have a full year of 1,3-D air monitoring data for 2025. Therefore, 1,3-D data from the first voided sampling date (October 16, 2025) through December 31, 2025 were removed from this report.

This report evaluates the results of samples collected from January 1, 2025, through October 6, 2025, and is the eighth report for this multi-year study. This is the final year of the Study 309 report due to the conversion and/or relocation of the Delhi and Parlier stations. The Parlier station results for 2026 will be reported in the 2026 Air Monitoring Network report.

Methods

Field and Laboratory Methods

From January 1, 2025, through December 31, 2025², one 24-h ambient air sample (primary sample) was collected each week on a randomly assigned day of the week at Delhi and Parlier. Sample start times varied between 8 am to 4 pm, as they were left to the discretion of individual

² Data analyzed by CDFA from October 24, 2025, through the end of the year were voided by CDFA.

field staff. Samples were collected using a 6-liter SilcoCan® canister (Restek cat. no. 24142-65) pre-evacuated to a pressure of -30" Hg placed on either a Xonteck Model 901 or a Nutech 2703 automated active sampler. If the active sampler malfunctioned or was unavailable, a Veriflow SC423XL flow controller (i.e., a regulator) attached to the SilcoCan® canister was used to conduct the air sampling. Xonteck flow rates were set to 7.5 mL/min, Nutech flow rates to 3.1 mL/min, and regulator samples were targeted to 3.0 mL/min. Acceptable flow rates ranged within +/- 10% of the targeted rate. Approximately once a month, a collocated sample (which was placed adjacent to the primary samples) was collected. Delhi was chosen as the collocated site and was used as the quality control monitoring station. All samples were collected using the same standard air sampling procedures (Appendix VI). Samples were analyzed by CDFA's Center for Analytical Chemistry laboratory using method EMON-SM-05-059 (Appendix VII). CDFA's Center for Analytical Chemistry laboratory followed DPR's standard lab quality control procedures and conducted laboratory blanks and laboratory spikes during each analytical run (CDFA 2022).

Data Analysis

DPR aggregates the laboratory results of 1,3-D isomers (*cis*- and *trans*-) per sample to calculate total 1,3-D concentrations. Before aggregation, DPR applies a substitution to non-detections (NDs) and trace values. Data collected before the CDFA update in May 2022 substitutes one-half of the reporting limit (RL) for non-detections (ND) before aggregation. However, if either *cis*- or *trans*-isomers of 1,3-D were detected, then the total 1,3-D result equals the value of that detection, and no substitution is applied to the ND isomer. Following the May 2022 update, substitution of one-half of the method detection limit (MDL) is applied to all ND results. This update also introduced trace values. A trace detection is a value somewhere between the MDL and the RL. Trace values are substituted using the following formula: $(MDL+RL)/2$. MDL values were changed as part of this update. MDL values changed three more times in 2024 and once again at the start of 2025 (Appendix V). The RL of 0.01 parts per billion (ppb) for each isomer has not changed during this study.

Total 1,3-D concentrations are the basis for exposure estimates that are compared to health-based SLs and RTs (Table 1). The maximum 24-h concentration is used as an estimate of acute exposure. Sub-chronic exposure equals the maximum 90-day (13 consecutive weeks) rolling average concentration. The one-year average concentration determines chronic exposure. DPR calculates lifetime exposure as the running average concentration since December 2016. An evaluation of chronic exposures was not included in this report due to the voiding of the data by CDFA.

To determine the risk associated with each exposure period, DPR uses a Hazard Quotient (HQ). The HQ is calculated as a ratio of the measured 1,3-D concentrations to a SL or a RT. An HQ of greater than one indicates exceedance of the SL or RT and requires DPR to act to further evaluate the data and assess possible mitigation measures (DPR 2011).

Table 1. Screening levels (SL) and regulatory target (RT) for 1,3-dichloropropene (1,3-D).

Exposure	Exposure Period	SL / RT (ppb)	Potential Health Effect
Acute	72 hours	55	Change in body weight
Sub-chronic	90 days	3	Tissue damage in nose and lung
Chronic	1 year	2	Tissue damage in nose and lung
Lifetime/Cancer Risk	70 years	0.56	Cancer

Study Limitations

To address the study's goal of long-term ambient air monitoring in a region of high 1,3-D use, monitoring is conducted once per week for 24-h; however, acute RTs are based on submitted toxicology studies that reference a 72-h period. Due to current field methods, DPR is not able to collect 72-h air samples. The estimate of acute exposure is thus based on a 24-h sample.

The RT for lifetime exposure is derived from submitted toxicology studies and is based on a set of assumptions for one person's cancer risk over a 70-year average of inhalation exposure (DPR 2016). The lifetime/cancer risk requires 70 years of data; however, this study was initiated in December 2016. Thus, the estimate of lifetime risk exposure is calculated as the running average concentration since the start of this study.

Air Monitoring Results

From January 1, 2025, through October 6, 2025, 82 primary samples were collected from monitoring sites in Delhi and Parlier (Appendices I and II). All samples were valid. 1,3-D was detected in 43 (52%) of these air samples. Please note that CDFA has recalled and voided 1,3-D data collected starting in early October 2025. Therefore, 1,3-D data collected from October 16, 2025, through December 2025 were removed from this report. Therefore, chronic exposure calculations for 1,3-dichloropropene are not included in this report.

Delhi

Forty-one valid primary samples were collected at the Delhi site from January 1, 2025, through October 06, 2025. Sixty-three percent (26 samples) were quantifiable detections above the RL of 0.01 ppb. Quantifiable detections ranged from 0.02 to 0.90 ppb. Twelve samples resulted in NDs and the remaining three samples were trace. No concentration exceeded established targets for acute or sub-chronic exposures. Acute, sub-chronic, and lifetime exposure estimates were below an HQ of 1.0. The highest observed HQ was 0.52 for the lifetime exposure period (Table 2).

Table 2. Maximum concentration for each exposure period in Delhi.

Exposure	Exposure Period	Concentration (ppb)	SL / RT (ppb)	Hazard Quotient*
Acute	72 hours**	0.90	55	0.02
Sub-chronic	90 days	0.37	3	0.12
Chronic***	1 year	NA	2	NA
Lifetime	70 years****	0.29	0.56	0.52

* Calculated as the ratio of measured concentration to regulatory target (RT) or screening level (SL)

** Compared using a 24-h sample

*** Data analyzed by CDFA from October 24, 2025, through the end of the year were voided by CDFA.

**** Calculated from available data Dec. 2016 - Oct. 6, 2025.

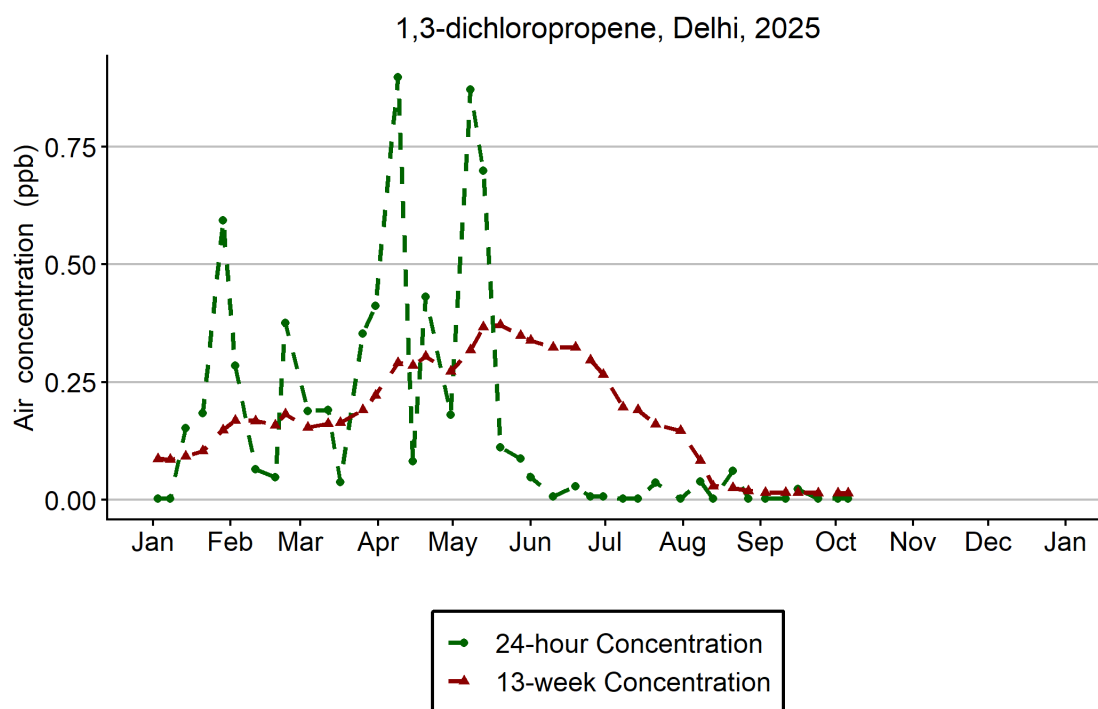


Figure 1. Temporal trend in 1,3-dichloropropene (1,3-D) concentrations in Delhi in 2025 (Acute RT = 55 ppb; Sub-chronic SL = 3 ppb), based on data collected from January 2025 through October 6, 2025, as data analyzed by CDFA after Oct. 6, 2025 were voided by CDFA.

Parlier

Forty-one valid primary samples were collected at the Parlier site from January 1, 2025, through October 06, 2025. Forty-one percent (17 samples) were quantifiable detections. Quantifiable detections ranged from 0.03 to 1.34 ppb. One sample resulted in trace. Twenty-three samples resulted in NDs. No detection exceeded established targets for acute or sub-chronic, exposures. Acute and sub-chronic exposure estimates were below an HQ of 1.0 (Table 3).

There was continued exceedance of the RT (HQ > 1.0) for lifetime exposure, after comparison with the exposure estimate based on samples collected between December 2016 and October 6, 2025. This is largely due to a single high detection of 140 ppb in October 2018 and not a direct result of concentrations from 2025.

Table 3. Maximum concentration for each exposure period in Parlier.

Exposure	Exposure Period	Concentration (ppb)	SL / RT (ppb)	Hazard Quotient*
Acute	72 hours**	1.34	55	0.02
Sub-chronic	90 days	0.51	3	0.17
Chronic***	1 year	NA	2	NA
Lifetime	70 years****	0.95	0.56	1.70

* Calculated as the ratio of measured concentration to regulatory target (RT) or screening level (SL)

** Compared using a 24-h sample

*** Data analyzed by CDFA from October 24, 2025, through the end of the year were voided by CDFA.

**** Calculated from available data Dec. 2016 - Oct. 6, 2025.

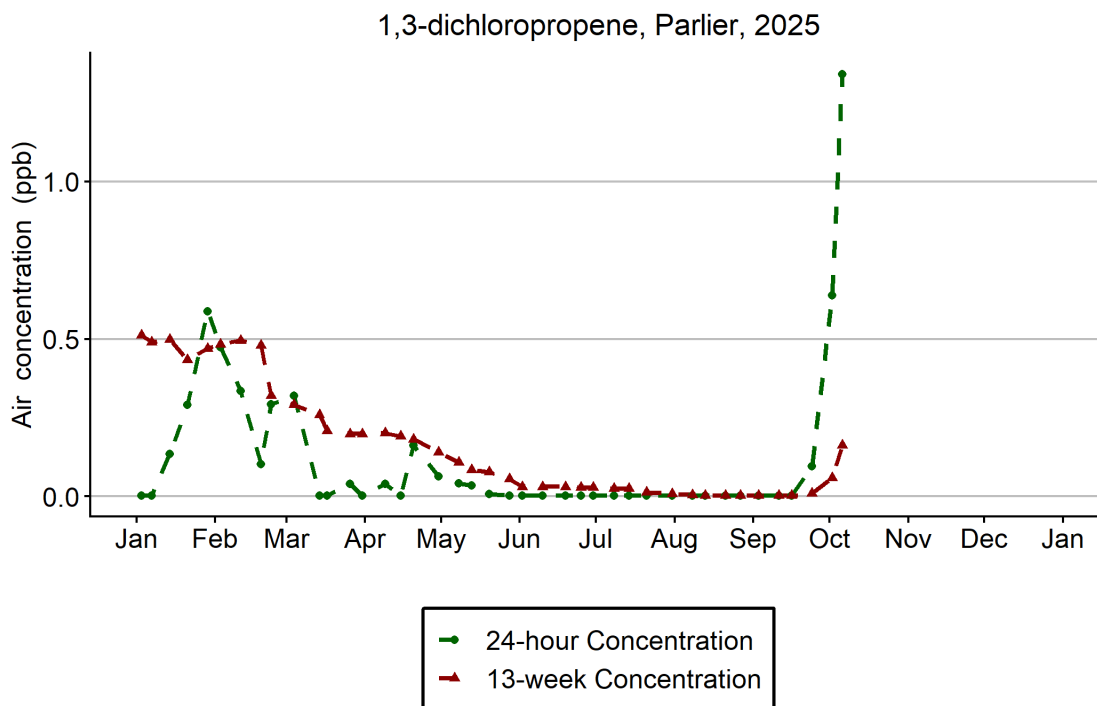


Figure 2. Temporal trend in 1,3-dichloropropene (1,3-D) concentrations in Parlier in 2025 (Acute RT = 55 ppb; Sub-chronic SL = 3 ppb), based on data collected from January 2025 through October 6, 2025, as data analyzed by CDFA after Oct. 6, 2025 were voided by CDFA.

Quality Assurance Results

Collocated Samples

From January 1, 2025, through October 06, 2025, 11 collocated paired air samples were collected from the Delhi site. Four pairs of sample results reported NDs for all isomers in the primary and collocated samples, which prevented DPR from calculating a relative percent difference for these pairs. Similarly, two paired samples (A614/A615 and A626/A627) resulted in a quantifiable detection and ND, and no relative percent difference was determined. Six paired samples had measurable detections above the RL, resulting in an average relative percent difference of 8.2%. One collocated pair of air samples (B441/B442) was collected from Parlier. Both samples were quantifiable. The relative percent difference was 6%. Table 4 summarizes the results of the 12 collocated samples.

Table 4. Summary of collocated sample results and absolute relative percent difference.

Sample Date	Primary Sample	Primary Result (ppb)	Collocated Sample	Collocated Result (ppb)	Relative % Difference
2/3/2025	A581	0.29	A582	0.25	13%
2/11/2025	B441	0.33	B442	0.32	3%
3/12/2025	A588	0.191	A587	0.194	1.5%
4/15/2025	A593	0.082	A594	0.083	1.2%
4/20/2025	A595	0.43	A596	0.46	7.2%
5/8/2025	A598	0.87	A599	1.07	21%
6/30/2025	A607	ND	A608	ND	N/A
7/31/2025	A612	ND	A613	ND	N/A
8/8/2025	A614	0.039	A615	ND	N/A
9/3/2025	A619	ND	A620	ND	N/A
10/2/2025	A624	ND	A625	ND	N/A
10/6/2025	A626	ND	A627	0.12	N/A

Laboratory Spikes and Blanks

For quality assurance purposes, the CDFA Laboratory conducted 30 laboratory spikes when

performing the air sample analysis. Spike recovery rates averaged 93.8% (SD = 9.96) and 94.3% (SD = 14.41) for the *cis*- and *trans*-isomers, respectively. In addition, 28 laboratory blanks were evaluated; no cross-contamination was detected in these samples. Appendices III and IV include individual results of laboratory spikes and laboratory blanks.

Discussion

Comparisons to the Previous Year

In Delhi, the maximum acute concentration decreased from 1.42 to 0.90 ppb, the maximum sub-chronic concentration increased from 0.34 to 0.37 ppb, and the long-term (9-year) concentration decreased from 0.32 to 0.29 ppb (Table 5, Figure 3).

In Parlier, the maximum acute concentration decreased from 2.35 to 1.34 ppb, the maximum sub-chronic concentration decreased from 0.52 to 0.51 ppb, and the long-term (9-year) concentration decreased from 1.07 to 0.95 ppb (Table 6, Figure 4).

Table 5. Concentration (ppb) of 1,3-D in the ambient air in Delhi between 2017 and 2025.

Year	Acute	Sub-chronic	Chronic	Long-Term
2017	1.34	0.37	0.17	0.18
2018	2.27	0.61	0.25	0.21
2019	2.57	0.48	0.19	0.21
2020	4.72	1.26	0.59	0.30
2021	11.8	2.89	0.86	0.41
2022	3.52	0.78	0.35	0.40
2023	0.35	0.39	0.04	0.35
2024	1.42	0.34	0.11	0.32
2025*	0.90	0.37	NA	0.29

* Data based on samples collect from January 2025 through October 6, 2025, as data analyzed by CDFA after Oct. 6, 2025 were voided by CDFA.

Table 6. Concentration (ppb) of 1,3-D in the ambient air in Parlier between 2017 and 2025.

Year	Acute	Sub-chronic	Chronic	Long-Term
2017	20.11	2.31	0.78	0.76
2018	140.23	13.27	3.71	2.15
2019	2.61	2.30	0.34	1.56
2020	13.37	2.03	0.64	1.34
2021	31.41	4.15	1.95	1.46
2022	13.63	3.00	0.98	1.39
2023	1.09	2.64	0.10	1.20
2024	2.35	0.52	0.16	1.07

2025*	1.34	0.51	NA	0.95
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* Data based on samples collect from January 2025 through October 6, 2025, as data analyzed by CDFA after Oct. 6, 2025 were voided by CDFA.

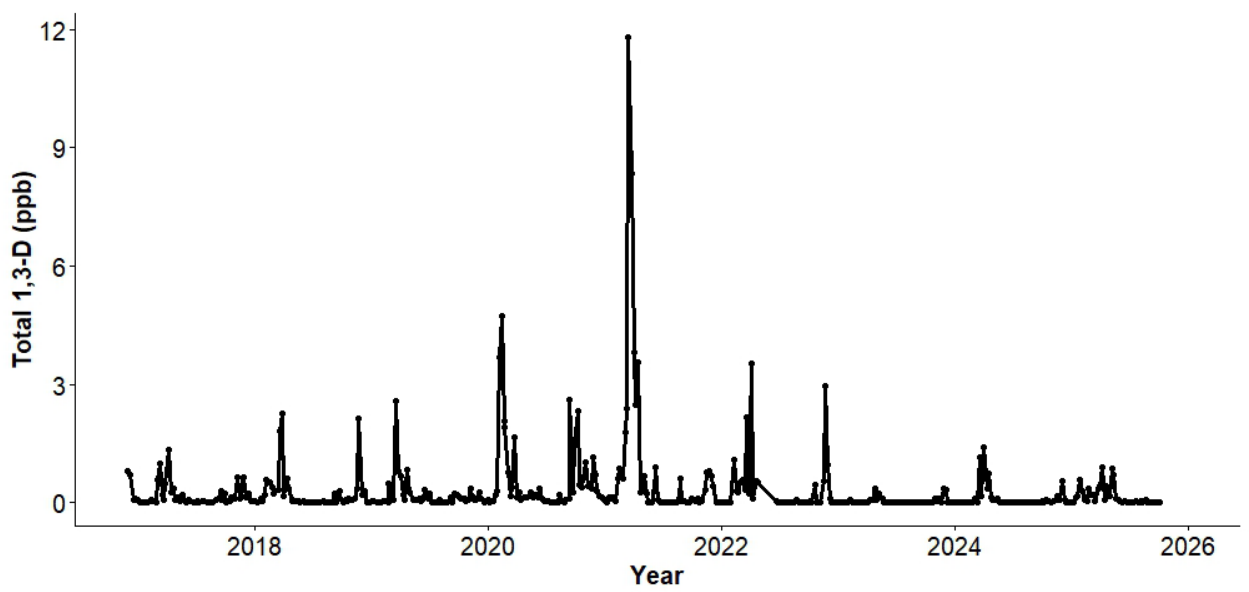


Figure 3. Delhi air concentrations since the beginning of the study from December 2016 to October, 6 2025.

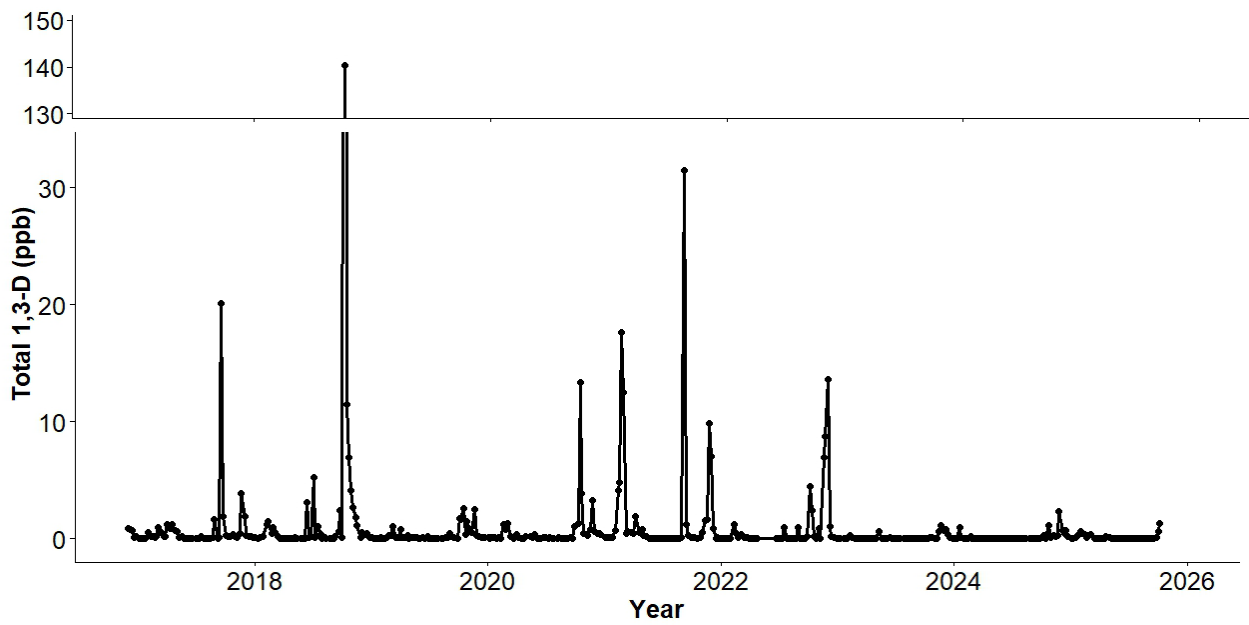


Figure 4. Parlier air concentrations since the beginning of the study from December 2016 to October 6, 2025.

Conclusion

The year 2025 marked the ninth consecutive year of 1,3-D ambient monitoring in the communities of Delhi and Parlier. The ambient 1,3-D results collected in this study continue to provide meaningful information for the evaluation of acute, sub-chronic, and lifetime concentrations in high-use communities. Delhi's 1,3-D concentrations observed in calendar year 2025 were below the currently established thresholds of 1,3-D for acute, sub-chronic, and lifetime (70-year average) concentrations. In Parlier, concentrations of 1,3-D were also below acute and sub-chronic exposure thresholds. Lifetime (9-year average) concentration was above the currently established lifetime (70-year average) threshold in Parlier, due to a single high detection in October 2018. DPR 22-005 (additions and amendments to Title 3, California Code of Regulations, sections 6448-6448.4, 6452, 6624, 6626, 6881) addresses 72-h acute risk and 70-year lifetime cancer risk to residents and other non-occupational bystanders (adults and children) from 1,3-D (CDPR 2024). As part of that regulation, DPR analyzes townships and monitoring locations. An analysis of both Delhi and Parlier, is included in the draft 2025 1,3-D annual report.

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Appendices

Appendix I. Raw data for Delhi. Total 1,3-D is the sum of *cis*- and *trans*-1,3-D.

Sample Date	Sample ID	Total 1,3-D (ppb)	<i>cis</i> -1,3-D (ppb)	<i>trans</i> -1,3-D (ppb)
1/3/2025	309-A575	ND	ND	ND
1/8/2025	309-A577	ND	ND	ND
1/14/2025	309-A578	0.152	0.0899	0.0619
1/21/2025	309-A579	0.184	0.105	0.0791
1/29/2025	309-A580	0.594	0.311	0.283
2/3/2025	309-A581	0.285	0.13	0.155
2/11/2025	309-A583	0.0644	0.0248	0.0396
2/19/2025	309-A584	0.0476	0.0197	0.0279
2/23/2025	309-A585	0.376	0.199	0.177
3/4/2025	309-A586	0.189	0.102	0.0874
3/12/2025	309-A588	0.191	0.112	0.0786
3/17/2025	309-A589	0.0381	0.0199	0.0182
3/26/2025	309-A590	0.353	0.21	0.143
3/31/2025	309-A591	0.412	0.224	0.188
4/9/2025	309-A592	0.898	0.507	0.391
4/15/2025	309-A593	0.082	0.0419	0.0401
4/20/2025	309-A595	0.431	0.232	0.199
4/30/2025	309-A597	0.18	0.067	0.113
5/8/2025	309-A598	0.871	0.456	0.415
5/13/2025	309-A600	0.699	0.356	0.343
5/20/2025	309-A601	0.111	0.0456	0.0652
5/28/2025	309-A602	0.087	0.0404	0.0466
6/1/2025	309-A603	0.0475	0.0218	0.0257
6/10/2025	309-A604	Trace	Trace	Trace
6/19/2025	309-A605	0.0288	0.0114	0.0174
6/25/2025	309-A606	Trace	Trace	Trace
6/30/2025	309-A607	Trace	ND	Trace
7/8/2025	309-A609	ND	ND	ND
7/14/2025	309-A610	ND	ND	ND
7/21/2025	309-A611	0.0367	0.0136	0.0231
7/31/2025	309-A612	ND	ND	ND
8/8/2025	309-A614	0.0388	0.0142	0.0246
8/13/2025	309-A616	ND	ND	ND
8/21/2025	309-A617	0.0616	0.0306	0.031

Sample Date	Sample ID	Total 1,3-D (ppb)	<i>cis</i> -1,3-D (ppb)	<i>trans</i> -1,3-D (ppb)
8/27/2025	309-A618	ND	ND	ND
9/3/2025	309-A619	ND	ND	ND
9/11/2025	309-A621	ND	ND	ND
9/16/2025	309-A622	0.0227	0.0113	0.0114
9/24/2025	309-A623	ND	ND	ND
10/2/2025	309-A624	ND	ND	ND
10/6/2025	309-A626	ND	ND	ND

Appendix II. Raw data for Parlier. Total 1,3-D is the sum of *cis*- and *trans*-1,3-D.

Sample Date	Sample ID	Total 1,3-D (ppb)	<i>cis</i>-1,3-D (ppb)	<i>trans</i>-1,3-D (ppb)
1/3/2025	309-B435	ND	ND	ND
1/7/2025	309-B436	ND	ND	ND
1/14/2025	309-B437	0.134	0.085	0.0486
1/21/2025	309-B438	0.29	0.186	0.104
1/29/2025	309-B439	0.588	0.306	0.282
2/3/2025	309-B440	0.473	0.218	0.255
2/11/2025	309-B441	0.334	0.158	0.176
2/19/2025	309-B443	0.103	0.0524	0.0502
2/23/2025	309-B444	0.293	0.156	0.137
3/4/2025	309-B445	0.319	0.176	0.143
3/14/2025	309-B446	ND	ND	ND
3/17/2025	309-B447	ND	ND	ND
3/26/2025	309-B448	0.039	0.021	0.018
3/31/2025	309-B449	ND	ND	ND
4/9/2025	309-B450	0.039	0.0191	0.0199
4/15/2025	309-B451	ND	ND	ND
4/20/2025	309-B452	0.162	0.091	0.0708
4/30/2025	309-B453	0.0627	0.0333	0.0294
5/8/2025	309-B454	0.0411	0.0219	0.0192
5/13/2025	309-B455	0.0347	0.0151	0.0196
5/20/2025	309-B456	Trace	Trace	ND
5/28/2025	309-B457	ND	ND	ND
6/2/2025	309-B458	ND	ND	ND
6/10/2025	309-B459	ND	ND	ND
6/19/2025	309-B460	ND	ND	ND
6/25/2025	309-B461	ND	ND	ND
6/30/2025	309-B462	ND	ND	ND
7/8/2025	309-B463	ND	ND	ND
7/14/2025	309-B464	ND	ND	ND
7/21/2025	309-B465	ND	ND	ND
7/31/2025	309-B466	ND	ND	ND
8/8/2025	309-B467	ND	ND	ND
8/13/2025	309-B468	ND	ND	ND
8/21/2025	309-B469	ND	ND	ND
8/27/2025	309-B470	ND	ND	ND
9/3/2025	309-B471	ND	ND	ND

Sample Date	Sample ID	Total 1,3-D (ppb)	<i>cis</i> -1,3-D (ppb)	<i>trans</i> -1,3-D (ppb)
9/11/2025	309-B472	ND	ND	ND
9/16/2025	309-B473	ND	ND	ND
9/24/2025	309-B474	0.0954	0.0541	0.0413
10/2/2025	309-B475	0.639	0.396	0.243
10/6/2025	309-B476	1.34	0.701	0.64

Appendix III. Laboratory and spike recovery data.

Analysis Date	Spike Amount (ppb)	<i>cis</i> Result (ppb)	<i>trans</i> Result (ppb)	<i>cis</i> -1,3-D Recovery (%)	<i>trans</i> -1,3-D Recovery (%)
1/16/2025	0.150	0.129	0.133	86.1	88.6
1/21/2025	0.150	0.153	0.152	102.2	101.5
1/30/2025	0.150	0.12	0.122	80.0	81.3
2/14/2025	0.150	0.156	0.15	104.0	100.0
2/27/2025	0.150	0.126	0.111	84.0	74.0
2/28/2025	0.150	0.124	0.113	82.4	75.1
3/6/2025	0.150	0.115	0.106	76.4	70.5
3/20/2025	0.150	0.16	0.17	106.6	113.0
4/10/2025	0.150	0.144	0.148	95.9	98.3
4/21/2025	0.150	0.145	0.144	96.8	96.0
4/29/2025	0.150	0.154	0.158	102.9	105.0
5/8/2025	0.150	0.143	0.15	95.3	100.1
5/21/2025	0.150	0.16	0.162	107.0	108.0
5/27/2025	0.150	0.145	0.153	96.8	102.0
6/10/2025	0.150	0.168	0.173	111.9	115.2
6/12/2025	0.150	0.132	0.131	87.7	87.1
6/30/2025	0.150	0.133	0.128	88.9	85.5
7/8/2025	0.150	0.118	0.108	78.7	71.7
7/10/2025	0.150	0.137	0.142	91.2	94.5
7/17/2025	0.150	0.14	0.14	91.1	95.9
7/24/2025	0.150	0.155	0.166	103.0	110.0
8/7/2025	0.150	0.167	0.181	111.0	121.0
8/14/2025	0.150	0.141	0.143	94.1	95.4
8/22/2025	0.150	0.1415	0.1437	94.3	95.8
8/28/2025	0.150	0.146	0.158	97.1	105.0
9/5/2025	0.150	0.144	0.156	96.2	104.3
9/15/2025	0.150	0.111	0.0953	74.2	63.5
9/25/2025	0.150	0.132	0.118	88.2	78.7
10/3/2025	0.150	0.149	0.158	99.1	105.5
10/9/2025	0.150	0.137	0.131	91.1	87.0

Appendix IV. Laboratory and blank recovery data.

Analysis Date	<i>cis</i> - Result	<i>trans</i> - Result
1/16/2025	ND	ND
1/21/2025	ND	ND
1/30/2025	ND	ND
2/14/2025	ND	ND
2/27/2025	ND	ND
2/28/2025	ND	ND
3/6/2025	ND	ND
3/20/2025	ND	ND
4/10/2025	ND	ND
4/21/2025	ND	ND
4/29/2025	ND	ND
5/8/2025	ND	ND
5/21/2025	ND	ND
5/27/2025	ND	ND
6/10/2025	ND	ND
6/12/2025	ND	ND
6/30/2025	ND	ND
7/8/2025	ND	ND
7/10/2025	ND	ND
7/17/2025	ND	ND
7/24/2025	ND	ND
8/7/2025	ND	ND
8/14/2025	ND	ND
8/22/2025	ND	ND
8/28/2025	ND	ND
9/5/2025	ND	ND
9/15/2025	ND	ND
9/25/2025	ND	ND
10/3/2025	ND	ND
10/9/2025	ND	ND

Appendix V. Method Detection Limits

First Applicable Sample Date	<i>cis</i> -1,3-D (ppb)	<i>trans</i> -1,3-D (ppb)
N/A	0.01	0.01
05/01/2022	0.00815	0.00655
5/18/2024	0.00278	0.00252
11/17/2024	0.00621	0.00342
12/5/2024	0.00281	0.00479
1/1/2025	0.005	0.005

Appendix VI. Study #309: Monitoring of 1,3-dichloropropene in Merced and Fresno Counties. (Document Attached)

Appendix VII. Determination of bromomethane, *cis*-1,3-dichloropropene and *trans*-1,3-dichloropropene in ambient air collected in air canisters. (Document Attached)