



1,2,3-Trichloropropane (1,2,3-TCP)

- Legal Limit (Maximum Contaminant Level: MCL): 0.005 µg/L^a
- Public Health Goal (PHG): 0.0007 µg/L^c

Common sources of the contaminant in the Central Valley and Central Coast

Most 1,2,3-TCP contamination stems from the extensive application of soil fumigants manufactured by Shell Oil and Dow Chemical Company containing the unnecessary impurity 1,2,3-TCP prior to the 1980s. 1,2,3-TCP has also been used as an industrial solvent, and as a cleaning and degreasing agent.^d Even though 1,2,3-TCP is no longer being applied to fields as a pesticide ingredient, it is extremely persistent and remains in groundwater a very long time.^e

Possible health impacts of short-term exposure^f

- Irritation of the skin, nose, eyes, and/or throat
- Drowsiness
- Headache
- Impacts on concentration, memory, and muscle coordination

Possible health impacts of long-term exposure^g

- Liver and kidney damage
- Cancer

Sensitive populations^h

Communities in agricultural regions (even many urban areas that were former agricultural regions) frequently have 1,2,3-TCP in their groundwater from its historic application as a pesticide byproduct.^d Communities at locations that manufactured the chemical or near hazardous waste sites where 1,2,3-TCP was improperly stored or disposed, are also at risk. Fetuses, infants, and children have higher sensitivity to carcinogenic chemicals.

Pathways of exposureⁱ

Exposure can occur through inhalation (usually from steam produced from 1,2,3-TCP contaminated water), dermal (skin) exposure, or ingestion of contaminated water (by drinking, cooking, showering, etc.).

Tips for reducing exposure at home

- Buy bottled water for drinking, cooking, making ice cubes, and brushing teeth.
- Avoid bathing, showering, or washing dishes and produce with hot water that produces excess steam.
- Take cooler temperature showers and limit the length of your showers to minimize exposure.

Community-driven water solutions through organizing, education, and advocacy.

Soluciones de agua impulsadas por la comunidad a través de la organización, educación y defensa al acceso al agua potable.

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1,2,3-TCP References

- a. Cal Code of Regulations, “Maximum Contaminant Levels - Organic Chemicals,” available at [https://govt.westlaw.com/calregs/Document/IA7B3800D18654ABD9E2D24A445A66CB9?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/IA7B3800D18654ABD9E2D24A445A66CB9?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)) (last visited Apr. 2020).
- b. US Environmental Protection Agency(2017), “Technical Fact Sheet – 1,2,3-Trichloropropane (TCP),” available at https://www.epa.gov/sites/production/files/2017-10/documents/ffrrofactsheet_contaminants_tcp_9-15-17_508.pdf (last visited Apr. 2020).
- c. OEHHA (website), “1,2,3-Trichloropropane,” available at <https://oehha.ca.gov/chemicals/123-trichloropropane> (last visited Apr. 2020).
- d. SWRCB (2017), “Groundwater Information Sheet,” available at www.waterboards.ca.gov/gama/docs/coc_tcp123.pdf (last visited Apr. 2020).
- e. US Environmental Protection Agency(2017), “Technical Fact Sheet – 1,2,3-Trichloropropane (TCP),” available at https://www.epa.gov/sites/production/files/2017-10/documents/ffrrofactsheet_contaminants_tcp_9-15-17_508.pdf (last visited Apr. 2020).
- f. US Environmental Protection Agency (2017), “Technical Fact Sheet – 1,2,3-Trichloropropane (TCP),” available at https://www.epa.gov/sites/production/files/2017-10/documents/ffrrofactsheet_contaminants_tcp_9-15-17_508.pdf (last visited Mar. 2020).
- g. US Environmental Protection Agency(2017), “Technical Fact Sheet – 1,2,3-Trichloropropane (TCP),” available at https://www.epa.gov/sites/production/files/2017-10/documents/ffrrofactsheet_contaminants_tcp_9-15-17_508.pdf (last visited Mar. 2020).
- h. California Water Boards (website) “1,2,3, -Trichloropropane (1,2,3 - TCP),” available at www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/123TCP.html (last visited Mar. 2020).
- i. National Toxicology Program, Department of Health and Human Services (2016), “Report on Carcinogens, 14th Edition, 1,2,3-Trichloropropane,” available at <http://ntp.niehs.nih.gov/ntp/roc/content/profiles/trichloropropane.pdf> (last visited March 6, 2019).

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