



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

- Legal Limit (the Maximum Contaminant Level, or MCL<sup>i</sup>): No MCL has been established by California or the federal government; however the CA State Water Board began the rulemaking process in January 2016 and expects an MCL to be adopted by 2017.
- Notification Level: 0.005 µg/L<sup>ii</sup>
- Public Health Goal (PGH): 0.0007 µg/L<sup>iii</sup>

### Common sources of the contaminant in the Central Valley

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.<sup>iv</sup> 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.<sup>v</sup>

### Possible health effects of short-term exposure<sup>vi</sup>

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

### Possible health of effects of long-term exposure

Liver and kidney damage<sup>vii</sup>  
Cancer<sup>viii ix</sup>

### Sensitive populations

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.<sup>x, xi</sup> 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 exposure<sup>xii</sup>

Exposure can occur through inhalation, 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 or produce with hot water that produces steam.
- When showering, remember to keep your mouth closed in order to avoid accidental exposure.
- Contact the Community Water Center to learn more or to get involved in our campaign to establish a health-protective drinking water standard for 1,2,3-TCP.  
[http://www.communitywatercenter.org/123\\_tcp](http://www.communitywatercenter.org/123_tcp)

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[www.communitywatercenter.org](http://www.communitywatercenter.org)

## 1,2,3-TCP References

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<sup>i</sup> The Maximum Contaminant Level (MCL) is the highest level of a contaminant allowed in drinking water, as set by the federal Environmental Protection Agency (EPA) and the California State Water Resources Control Board (SWRCB).

<sup>ii</sup> The Notification Level is a health-advisory level established by the State Water Resources Control Board (SWRCB)

[http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/123TCP.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/123TCP.shtml)

<sup>iii</sup> *ibid*

<sup>iv</sup> [http://www.waterboards.ca.gov/gama/docs/coc\\_tcp123.pdf](http://www.waterboards.ca.gov/gama/docs/coc_tcp123.pdf)

<sup>v</sup> [http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet\\_contaminant\\_tcp\\_january2014\\_final.pdf](http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet_contaminant_tcp_january2014_final.pdf)

<sup>vi</sup> *ibid*

<sup>vii</sup> *ibid*

<sup>viii</sup> [http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/123TCP.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/123TCP.shtml)

<sup>ix</sup> <http://ntp.niehs.nih.gov/ntp/roc/content/profiles/trichloropropane.pdf>

<sup>x</sup> [http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet\\_contaminant\\_tcp\\_january2014\\_final.pdf](http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet_contaminant_tcp_january2014_final.pdf)

<sup>xi</sup> <http://www.sherleff.com/1-2-3-trichloropropane-tcp.html>

<sup>xii</sup> <http://ntp.niehs.nih.gov/ntp/roc/content/profiles/trichloropropane.pdf>, [http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet\\_contaminant\\_tcp\\_january2014\\_final.pdf](http://www2.epa.gov/sites/production/files/2014-03/documents/ffrrofactsheet_contaminant_tcp_january2014_final.pdf)

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