

**State Water Resources Control Board  
1,2,3-Trichloropropane (1,2,3-TCP) Maximum Contaminant Level (MCL) Regulations**

**Attachment A  
Written Text in Form STD 399**

**Page 1:**

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**Section A (Page 1):**

1. (other box) The proposed regulation directly impacts public drinking water systems. Public water systems are utilities, not businesses or individuals and, pursuant to Government Code Chapter 3.5, Article 2, Section 11342.610(b)(8), are specifically excluded from the definition of small businesses. However, the State Water Resources Control Board (State Water Board) recognizes that a small number of the identified public water systems likely provide water solely to businesses and that public water systems often provide water to businesses. The State Water Board also recognizes that costs for the treatment and monitoring would likely be passed on to a water system's customers, which may include individuals and businesses. Therefore, even though the regulation does not directly affect businesses or individuals, those entities may be indirectly impacted by the regulation. Similarly, no reporting is required of businesses, but reporting of monitoring results would be required of the public water systems, and such reporting is necessary for health, safety, or welfare of the people of the state to ensure compliance with the drinking water MCL. Those costs for reporting were considered as part of the monitoring costs.
  
3. As noted above, the regulation directly impacts only public water systems, which are not considered businesses or individuals and are excluded from the definition of a small business. (Gov. Code § 11342.610(b)(8).) The State Water Board does recognize that indirect impacts to businesses may occur as a result of increased water rates due to the monitoring and treatment costs to public water systems being passed on to their customers. Of the 4,296 public water systems estimated to be impacted as a result of this regulation (see Cost Estimating Methodology), the State Water Board estimates that 2,711 of those systems are privately owned and 1,410 are locally owned (e.g., municipal water systems). The private water systems may also be businesses, such as a mobile home park or investor owned utilities, which will incur indirect impacts and the private and local water systems are likely to include businesses within their service areas.

The State Water Board does not track or have a way of estimating the total number of businesses contained within every water system. The types of businesses expected to be indirectly impacted consist of every type of business that requires potable drinking water for either their customers, employees, or processes/operations.

The State Water Board also does not track or have a way of estimating the percentage of businesses that meet the definition of a small business.

4. As noted above, the regulation directly impacts only public water systems, which are not considered businesses or individuals, and are specifically excluded from the definition of a small business (Gov. Code § 11342.610(b)(8)). Though there are likely to be some small impacts on disposable income and some gains in employment due to the regulations, these impacts are not likely to create or eliminate any businesses. However, businesses providing Granulated Active Carbon (GAC) treatment technology, which is identified in the regulation as the “best available technology” to treat 1,2,3-TCP, and/or laboratory or monitoring services may experience increased demand and there are opportunities for companies to be created in California in response to the increased demand for GAC systems and/or new analytical methods and treatment technologies to detect and address 1,2,3-TCP.
5. The impact is both statewide and regional. Monitoring is required by all applicable public water systems; however, certain geographic areas were identified in the SRIA, based on available data, as being more impacted by the contamination than others, including Kern, Fresno, Tulare, Merced, and Los Angeles counties (please refer to Pages 4-6 and the maps in Attachment 1 of the SRIA for more information).

**Section B (Page 2):**

1. Costs to businesses and individuals are assumed to result from public water systems passing on the costs of compliance to their customers. The regulation does not have an end-date and therefore will not have a lifetime cost; however, the estimated total cost over 20 years is estimated to be \$497,671,538.

(a): As noted earlier, public water systems are excluded from the definition of a small business. Additionally, the State Water Board does not track the number or types of businesses either associated with or within the service area of public water systems.

(b): A typical business associated with or within the service area of a public water system may incur indirect costs resulting from the public water system passing on costs to comply with this regulation. Initial costs for a water system are estimated to be \$528 in the first calendar year for initial monitoring; these costs may be passed to businesses and individuals. Ongoing annual costs are dependent upon whether a public water system is in compliance with the regulation.

A water system in compliance will likely pass on costs of approximately \$44-\$88 per year for ongoing monitoring.

A water system not in compliance will likely pass on costs of treatment necessary to come into compliance to businesses and individuals. These total costs for a water system are estimated to range from \$22,668-\$473,740 per year. The State Water Board does estimate that there are 1,303,731 service connections (with an estimated impacted population of 731,000 identified in the

SRIA) associated with water systems anticipated to not be in compliance with the regulation and therefore likely requiring capital improvements. Service connections may represent a household, business, or collection/mix of either (e.g., business park). The estimated annual cost for a service connection in a water system that requires such improvements is between \$13-\$609, depending on the number of service connections in a water system (for more information please refer to the Initial Statement of Reasons and the SRIA). Those water systems with higher numbers of service connections would experience lower per connection cost increases due to a larger number of connections sharing the costs of infrastructure upgrades, and ongoing operations and maintenance costs of the treatment systems. It should be noted that the estimate of the impacted number of service connections is based on currently available data for those water systems that have monitored for 1,2,3-TCP. The actual number of impacted service connections may be higher.

(c): The State Water Board assumes that 75% of the service connections identified as part of public water systems requiring the improvements described in (b) are households, and each contains an estimated 2-4 individuals, with 2.4 individuals being assumed in the cost estimating methodology (based on Census data). The State Water Board estimates that the annual cost to an individual in each household will range from \$10-\$254.

2. The State Water Board assumes that any industry served by the impacted public water systems will be indirectly affected, but does not have sufficient data to estimate how a given industry will be impacted in relation to others.
3. The State Water Board has determined that the proposed regulations would not require reports from businesses to the extent that PWS are not considered businesses pursuant to Government Code section 11342.610(b)(8). Additionally, the regulation is not anticipated to impose reporting requirements of any significance beyond already existing reporting requirements. Public Water Systems are already required to monitor for certain constituents and report the results to the State Water Board, and this regulation would add 1,2,3-TCP to that list. Any costs for the reporting are already included in the estimate for the monitoring. To the extent that this regulation is requiring reporting of businesses, that reporting is necessary for health, safety, or welfare of the people of the state.

**Section C (Page 2):**

1. Establishing an MCL for 1,2,3-TCP will support the Health and Safety Code's intent to ensure the water delivered by public water systems is pure, wholesome, and potable. By establishing an MCL, the public's exposure to 1,2,3-TCP and the potential risks of adverse health effects associated with 1,2,3-TCP are reduced. 1,2,3-TCP is a known toxin, recognized under California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as a chemical known to cause cancer.
2. The State Water Board is responsible for adopting primary drinking water standards, which must be set in accordance with the requirements of section 116365 of the California Safe Drinking Water Act (SDWA)(Health & Safety Code (HSC), div. 104, pt. 12, ch. 4, §116270 et seq.). Section 116365 requires that the MCL be set as close as feasible to the public health goal placing primary emphasis

on the protection of public health, and that to the extent technologically and economically feasible, avoids any significant risk to public health. The public health goal was set by the Office of Environmental Health Hazard Assessment in 2007 at 0.0000007 mg/L. An MCL below the proposed level of 0.000005 mg/L would not be technologically feasible due to limits on the ability to detect 1,2,3-TCP below 0.000005 mg/L.

3. The potential health benefits cannot be financially quantified.
4. Businesses providing GAC treatment systems and laboratory/monitoring services may expand in size and/or number. There are also opportunities for companies to be created in California in response to the increased demand for GAC systems or to develop new treatment technologies to address 1,2,3-TCP. However, given that GAC is an existing technology, the extent of possible expansion of businesses cannot be predicted, and the State Water Board does not anticipate the creation or elimination of any businesses as a result of this regulation.

**Section D (Page 3):**

2. The regulation does not have an end-date and therefore will not have a lifetime cost; however, the Standardized Regulatory Impact Assessment (SRIA) estimated total cost for the proposed regulation over 20 years is estimated to be \$497,671,538 and the total estimated cost for Alternative 2 (MCL at 0.000015 mg/L) over 20 years is \$289,987,971 (costs were determined by aggregating the direct costs in Tables 6 and 15 of the SRIA over a 20-year time period). The costs associated with harmful health effects resulting from Alternative 1, not regulating 1,2,3-TCP (e.g., increased cancer cases), were not determined due to a lack of data including highly variable short- and long-term medical costs and impacts resulting from loss of productivity.

Similarly, the benefit of reducing cancer risk - by requiring treatment of drinking water to maintain 1,2,3-TCP concentrations below the MCL - has not been estimated on a dollar basis, but it is estimated that establishing the MCL at 0.000005 mg/L would lead to a reduction of approximately 2.5 cancer cases per year for 70 years. Additional benefits identified (in addition to reduction in cancer) also include reduced use of bottled water and alternatives to drinking water, such as sweetened beverages and soda, as well as improved public perception in the safety of the drinking water supply.

3. As mentioned above, total lifetime cost for this regulation cannot be estimated as the regulation does not have an end date and it is difficult to predict how long the 1,2,3-TCP contamination will remain in the drinking water supply until concentrations are sufficiently reduced (due to treatment and other natural processes like dilution) to no longer require treatment. Benefits of treating drinking water supply for 1,2,3-TCP entail reducing risk to cancer over lifetime exposure; these benefits are difficult to determine on a dollar basis. Please also refer to the Response to Item No. 2 above.

### **Section E (Page 3):**

3. The **cost-effectiveness ratio** for the proposed regulation or the alternatives was not calculated due to the inherent difficulties described above in D2 and D3. Although HSC Section 116365 requires that for the purposes of determining economic feasibility, the State Water Board must consider the costs of compliance to public water systems, customers, and other affected parties with the proposed primary drinking water standard, including the cost per customer and aggregate cost of compliance, using best available technology, it does not require a cost-benefit analysis and instead requires that the MCL be set as close to the PHG as is feasible. Therefore, no cost-benefit analysis of the reduction of additional cases of cancer was conducted.
5. **The increase or decrease of investment in the State:** There are likely to be two types of investments. (1) There is likely to be an expansion in services for both GAC treatment (supply, operations, and disposal/regeneration of used filter media) and laboratory/monitoring. (2) There is likely to be an investment in the research for analytical methods that will detect lower concentrations of 1,2,3-TCP and also in the research to increase efficiency of treatment technologies and decrease of associated costs.

**The incentive for innovation in products, materials or processes:** Because GAC will be needed for the foreseeable future, there is an incentive to research alternative treatment technologies that can lower the annual costs. The alternatives may include a less expensive GAC medium or substitute for GAC, a regeneration method that allows the existing GAC to treat significantly more raw water, or an entirely new technology for removing 1,2,3-TCP from the raw water. Other areas for innovation include developing improved analytical methods that can reliably detect 1,2,3-TCP at lower concentrations.

**The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency:** The proposed regulation is intended to improve the quality of drinking water through the reduction of 1,2,3-TCP in drinking water provided to the public. 1,2,3-TCP is a known carcinogen, and establishing an MCL will result in a reduction in public health risk where a lower MCL will result in a greater risk reduction compared to a higher MCL. The proposed MCL of 0.000005 mg/L would result in 2.5 less cancer cases per year, assuming lifetime exposure of 70 years. Compliance with the adopted MCL may also result in improved public perception in the safety of their drinking water supply in areas where consumers are aware of this contamination issue. This could result in a reduction in both the use of bottled water and alternatives to drinking water, such as sweetened beverages and soda.

### **Fiscal Impact Statement (Page 4):**

#### **A. Fiscal Impact on Local Government (Page 4):**

2. Fiscal Impact on Local Government: \$28.67 million annually in direct impacts to public water systems run by local government, which is not reimbursable by the State pursuant to Article

XIIIB, Section 6 of the California Constitution. This value was determined using total estimated annual costs of complying with this regulation for those public water systems that are operated by local governments (obtained from the State Water Board's databases). These costs are not reimbursable because the regulation does not impose unique requirements on local governments; the regulation applies equally to both publicly-owned and privately-owned water systems. In addition, the publicly-owned systems can pass on the costs in increased service charges, fees or assessments. The first three years would represent the greatest cost to local government that needed to install treatment. The assumptions and calculations are contained in the SRIA and the Cost Estimating Methodology.

As described in the SRIA on Page 34, there are 58 PWS that are known to have sources contaminated with 1,2,3-TCP above 0.000005 mg/L that are operated by local government (city or county). Additional costs (beyond those addressed in the SRIA) may include planning, design, permitting and other administrative functions related to the installation of the treatment facilities. This additional workload is expected to be absorbed by existing local government personnel and resources. Hence, the proposed regulation does not significantly impact local government costs or tax revenue

#### **B. Fiscal Impact on State Government (Page 5):**

4. Fiscal impact on Public Water Systems Owned by State Government: \$0.10 million annually for public water systems owned by the state, which is anticipated to be absorbable by State agencies within their existing budgets. This value was determined using total estimated annual costs of complying with this regulation for those public water systems that are operated by state government (obtained from the State Water Board's databases).

The State Water Board expects that some public water systems with 1,2,3-TCP contamination in some or all of their active sources shall apply for and receive loans and grants from various California funding programs. The State Water Board anticipates that the funding will have an impact on the ability of California to fund other projects, either due to funding being less available for those projects or from staff workload issues. The State Water Board does not have sufficient information to project the extent of the impacts from this but does not anticipate a significant impact to California.

The State Board estimates that there will be no change to the Division of Drinking Water's Safe Drinking Water Account fees and caps. The fees, caps, and annual adjustments are specified in statute under Sections 116565, 116577, 116585, and 116590, California Health and Safety Code.

Fiscal Impact on State Water Board and other State Agencies: The State Water Board's DDW oversees approximately 12,768 water sources impacted by the proposed regulation. The initial impact of the proposed regulation would have a relatively small impact on staffing resources, which could be accommodated through redistribution of existing staff at the District office level. Additional personnel may be needed in the future for effective implementation and enforcement of the adopted MCL.

The establishment of an MCL will enable the Regional Water Quality Control Boards (RWQCBs) to more fully consider impacts on beneficial uses in areas with 1,2,3-TCP groundwater contamination. This could serve as a catalyst to protecting and restoring groundwater resources for present and future generations. The Department of Toxic Substances Control (DTSC) and Regional Water Boards may use the adopted MCL in their evaluation of groundwater contamination problems and associated cleanup actions. The establishment of an MCL would provide an additional resource for these agencies in evaluating groundwater contamination problems and associated remedial actions.

No other significant direct or indirect impacts on other State agencies associated with the adoption of this MCL have been identified. It is possible that there will be some minor indirect impacts on some State agencies as a result of construction projects associated with new treatment facilities. The potential indirect impacts might include the review of planning documents and California Environmental Quality Act documents. These potential impacts should be able to be absorbed within existing resources and staffing.

**C. Fiscal Effect on Federal Funding of State Programs (Page 5):**

4. Fiscal Impact on Federal Funding of State Programs: No direct fiscal impacts are anticipated to federally funded State agencies or programs. Indirect impacts may occur as a result of an increase or redirection in the use of federally provided funds used by State agencies for loan and grant programs to public water systems, but insufficient information exists for these indirect impacts to be calculated.