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## State Water Resources Control Board

### NOTICE OF PROPOSED RULEMAKING

**TITLE 22. Social Security  
DIVISION 4. Environmental Health  
CHAPTER 15 – Domestic Water Quality and Monitoring Regulations**

**SUBJECT: HEXAVALENT CHROMIUM MAXIMUM CONTAMINANT LEVEL  
(SWRCB-DDW-21-003)**

**NOTICE IS HEREBY GIVEN** that the State Water Resources Control Board (State Water Board) will conduct a public hearing during which time any interested person or such person's duly authorized representative may present statements, arguments, or contentions (all of which are hereinafter referred to as comments) relevant to the action described in this notice.

**NOTICE OF PUBLIC HEARING FOR A PROPOSED HEXAVALENT CHROMIUM  
MAXIMUM CONTAMINANT LEVEL (MCL) REGULATIONS**

[Gov. Code, §11346.5(a)(1)]

State Water Board staff will conduct an Administrative Procedure Act (APA) public hearing regarding the subject proposed regulations at the time and place noted below. At the hearing, any person may present comments orally or in writing relevant to the proposed action described in this notice. The public hearing will begin with a staff presentation summarizing the proposed regulations, followed by an opportunity for public comment. During the comment period, the public will be allowed three minutes to provide oral comments, unless additional time is approved.

**DATE:** 2 August 2023  
**TIME:** 1:00 P.M.  
**PLACE:** **Coastal Hearing Room  
CalEPA Building  
1001 I Street, Sacramento  
And via Video and Teleconference (for public commenters)**

The hearing will be recorded and will be streamed live at [video.calepa.ca.gov](https://video.calepa.ca.gov). Use this link to watch the webcast UNLESS you intend to comment. For those who wish to make oral comments, additional information about participating remotely is available at [bit.ly/dw\\_regs](https://bit.ly/dw_regs).

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

While a quorum of the State Water Board may be present, this hearing is for the public to provide comments in accordance with the APA. The Board will not take formal action. Final regulations are expected to be adopted by the Board later this year, after consideration of all written and oral comments. Additional information regarding State Water Board meetings, hearings, and workshops is available on the Board's internet web page at [waterboards.ca.gov/board\\_info/calendar/](http://waterboards.ca.gov/board_info/calendar/).

#### Language Services and Accessibility

Presentation slides will be translated into Spanish, and live Spanish interpretation will be provided. To request oral interpretation in another language or sign language services, please contact us at (916) 322-4265 or [languageservices@waterboards.ca.gov](mailto:languageservices@waterboards.ca.gov) by **1 July 2023**. We highly encourage contacting us as far in advance as possible about language needs.

Telecommunications device for deaf (TDD) users may contact the California Relay Service at 711, (800) 735-2929 or voice line at (800) 735-2922.

To request other accommodations, call (916) 341-5261 on or before **19 July 2023**.

#### **AUTHORITY AND REFERENCE**

[Gov. Code, §11346.5(a)(2); CCR Title 1, Div 1, Ch. 1, §14]

The State Water Board proposes to adopt this regulation under the authority granted by Health and Safety Code (HSC) sections 116270, 116271, 116275, 116350, 116365, 116365.5, 116375, and 116385. The proposed regulation would implement, interpret, or make specific HSC sections 116275, 116365, 116365.5, 116370, 116375, 116385, 116390, 116450, and 116470.

#### **INFORMATIVE DIGEST**

[Gov. Code, §11346.5(a)(3)]

#### Existing Laws and Regulations and Effect of Proposed Action

[Gov. Code, §11346.5(a)(3)(A)]

#### Existing Laws and Regulations

Existing laws related to the proposed action include the following:

- HSC section 116270(f) declares California's intent to improve upon the minimum requirements of the federal Safe Drinking Water Act Amendments of 1996 and to establish a program that is more protective of public health than the minimum federal requirements.
- HSC section 116365 requires that the State Water Board establish primary maximum contaminant levels (MCL) as close to the contaminant's public health goal (PHG) as is technologically and economically feasible at the time of adoption, while placing primary emphasis on protection of public health.
  - PHGs are established by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA). In July 2011,

OEHHA established a hexavalent chromium PHG of 0.02 micrograms per liter ( $\mu\text{g/L}$ ).

- HSC section 116365.5 specifically requires establishment of a hexavalent chromium MCL that complies with the HSC section 116365 criteria by 1 January 2004.
- HSC section 116370 requires the State Water Board to adopt a finding of best available technologies (BAT) for each contaminant at the time the standard is adopted, taking into consideration the costs and benefits of BAT proven effective under full-scale field application.
- HSC section 116375, subdivision (a), requires the State Water Board to adopt regulations for the monitoring of contaminants, including the type of contaminant, frequency and method of sampling and testing, and the reporting of results.
- HSC section 116375, subdivision (f), requires the State Water Board to adopt regulations including requirements for notifying the public of the quality of water delivered to consumers.
- HSC section 116385 requires any person operating a public water system to obtain and provide at that person's expense an analysis of the water to the State Water Board, in the form, covering those matters, and at intervals prescribed by the State Water Board. HSC section 116385 further requires that the analysis be performed by a laboratory duly certified by the State Water Board.
- HSC section 116390 requires that laboratories performing tests required pursuant to the California Safe Drinking Water Act be accredited for that testing by the California Environmental Laboratory Accreditation Program (ELAP).
- HSC section 116470 requires each PWS to prepare and deliver annual Consumer Confidence Reports to their customers containing information on each detected regulated contaminant, including the level of contaminant found in the drinking water, the corresponding public health goal and primary drinking water standard, any violations of the primary drinking water standard, and a statement of health concerns that resulted in regulation of that contaminant.
- HSC section 116555 requires that any person who owns a PWS shall ensure that the system complies with primary drinking water standards.

Existing regulations related to the proposed regulation include the following:

- 22 California Code of Regulation (CCR), section 64415, with limited exceptions, requires that analyses be performed by laboratories accredited to perform such analyses by ELAP, and unless directed otherwise by the State Water Board, that

analyses be made in accordance with methods prescribed at 40 Code of Federal Regulations sections 141.23 through 141.41, 141.66, 141.89, and 141.852.

- 22 CCR section 64432 requires certain surface water sources for transient-noncommunity water systems (TNCWS) and all active sources for community water systems (CWS) and nontransient-noncommunity water systems (NTNCWS) to be sampled and to have the samples analyzed for inorganic chemicals to determine compliance with drinking water standards, including MCLs.
- 22 CCR section 64432.8 requires each water supplier utilizing treatment to comply with one or more inorganic chemical MCL(s) to collect monthly samples of the treated water at a site prior to the distribution system and analyze for the chemical(s) for which treatment is being provided and, if an MCL is exceeded, to report the result within 48 hours of result receipt, resample to confirm the initial result within 48 hours of results receipt, and report the result of the confirmation sample result to the State Water Board within 24 hours of confirmation result receipt.
- 22 CCR section 64469 requires PWS to report the results of required analyses by the tenth day of the following month.
- 22 CCR section 64431 requires PWS to comply with a primary total chromium MCL of 50 µg/L.
- 40 CFR 141.62(b) requires CWS and NTNCWS to comply with a primary total chromium MCL of 100 µg/L.
- 22 CCR section 64432 establishes detection limits for purposes of reporting (DLRs) for each regulated chemical and requires PWS to monitor for those chemicals.
- 22 CCR section 64465 requires PWS to notify the State Water Board and the public when drinking water supplied to the public is noncompliant with a primary MCL and take appropriate action.
- 22 CCR section 64481 requires PWS to prepare annual Consumer Confidence Reports, which include language to inform the public for each chemical that has been detected in the water.

#### Effect of Proposed Rulemaking

The net effects of the proposed regulations would be as follows:

- PWS would be required to comply with a hexavalent chromium MCL of 10 µg/L according to a size-based compliance schedule;
- PWS exceeding the MCL before the applicable compliance date would be required to submit a compliance plan;

- CWS, NTNCWS, and wholesalers would be required to monitor for hexavalent chromium, and report sampling results consistent with existing requirements for monitoring and reporting of inorganic chemicals;
- TNCWS that use surface water and serve an average daily population greater than 1,000 or are determined subject to potential hexavalent chromium contamination based on a sanitary survey would be required to monitor for hexavalent chromium and report sampling results;
- PWS would be required to comply with a hexavalent chromium DLR of 0.1 µg/L;
- PWS would be required to use one of two specified hexavalent chromium analytical methods for required monitoring;
- PWS that violate the hexavalent chromium MCL would be required to use specific public notification health effects language;
- CWS and NTNCWS that detect hexavalent chromium would be required to use specific language in their Consumer Confidence Reports that identifies the major origins of hexavalent chromium in drinking water; and
- BAT would be identified for hexavalent chromium removal.

Comparable Federal Statute and Regulations

[Gov. Code, §11346.5(a)(3)(B), §11346.9(c)]

There are no federal regulations or statutes that address the specific subject addressed by the proposed regulations. Under the federal Safe Drinking Water Act and its implementing regulations, there is no drinking water standard specifically for hexavalent chromium. Hexavalent chromium is, however, currently indirectly regulated under California's 50 µg/L and U.S. EPA's 100 µg/L MCL for total chromium, of which hexavalent chromium is a component (40 CFR 141.62). Adoption of this regulation is not mandated by federal law or regulations.

Policy Statement Overview

[Gov. Code, §11346.5(a)(3)(C)]

Problem Statement

The State Water Board establishes drinking water standards to ensure that drinking water provided by PWS is at all times safe, pure, wholesome, and potable. All suppliers of domestic water to the public are subject to regulations adopted by the U.S. EPA under the Safe Drinking Water Act of 1974, as amended (42 U.S. C. §300f et seq.). California PWS are also subject to regulations adopted by the State Water Board under the California Safe Drinking Water Act (Health & Saf. Code, div. 104, pt. 12, ch. 4, §116270 et seq.). HSC section 116270(f) declares California's intent to improve upon the minimum requirements of the federal Safe Drinking Water Act Amendments of 1996 and to establish a program that is more protective of public health than the minimum federal requirements.

HSC 116365 requires the State Water Board to adopt primary drinking water standards for contaminants, specifying that each standard must be set at a level as close as technologically and economically feasible to the corresponding PHG, placing primary emphasis on the protection of public health. HSC 116365.5 specifically requires the establishment of a hexavalent chromium MCL. In 2011, OEHHA published the hexavalent chromium PHG at 0.02 micrograms per liter ( $\mu\text{g/L}$ ) (OEHHA, 2011). In May 2017, the Superior Court of Sacramento County issued a judgment invalidating a previously-established hexavalent chromium MCL and ordered the State Water Board to adopt a new MCL consistent with HSC 116365 (*California Manufacturers and Technology Association, et al. v. State Water Resources Control Board*, Super. Ct., Sacramento County, Case No. 34-2015-80001850.).

The State Water Board proposes to establish a primary drinking water standard for hexavalent chromium in the form of a MCL of 10  $\mu\text{g/L}$  or 0.010 milligrams per liter (mg/L), an associated initial DLR of 0.1  $\mu\text{g/L}$ . The State Water Board has determined that the proposed regulations are necessary to carry out the purposes of California's Safe Drinking Water Act. The proposed rulemaking is intended to satisfy the statutory mandates set forth in HSC sections 116365 and 116365.5, as well as the court order.

#### Broad Objectives

The broad objectives of this proposed regulatory action are to:

- Adopt a hexavalent chromium MCL to protect public health consistent with statutory requirements; and
- Adopt a DLR, BAT, public notification language, compliance schedule, analytical methods, and Consumer Confidence Report language to support the hexavalent chromium MCL.

#### Specific Benefits

The anticipated benefits to public health and safety of California residents from the proposed regulatory action are:

- Reduction of risk of adverse health effects associated with hexavalent chromium in drinking water by establishing a hexavalent chromium MCL, which translates to a reduction in associated cancer and noncancer cases;
- Provide PWS and State Water Board staff with hexavalent chromium treatment guidance through the identification of BATs;
- Provide consistency in analytical performance by establishing minimum levels of hexavalent chromium that must be reported; and
- Establish consistent quality of information between PWS and customers through specification of health effects language for public notification and major origins and compliance status language for Consumer Confidence Reports.

Additional anticipated benefits include:

- Enhanced public awareness of water quality served by requiring hexavalent chromium monitoring and public notification when a hexavalent chromium MCL violation occurs;
- Enhanced public awareness of water quality by requiring hexavalent chromium monitoring and reporting of detected hexavalent chromium levels in drinking water in annual Consumer Confidence Reports;
- Ability to evaluate performance of hexavalent chromium removal treatment technologies to concentrations at least as low as 0.1 µg/L to support feasibility analyses for future hexavalent chromium MCL review(s) and potential revision;
- Ability to determine hexavalent chromium occurrence in drinking water sources to concentrations at least as low as 0.1 µg/L to support evaluation of source occurrence, health effects, and cost impact analyses for future hexavalent chromium MCL review(s) and potential revision; and
- Ability for small PWS to benefit from improvements in treatment realized by larger PWS through the compliance schedule.

*Evaluation of Inconsistency or Incompatibility with Existing State Regulations*

[Gov. Code, §11346.5(a)(3)(D)]

The State Water Board reviewed its existing general regulations and regulations specific to hexavalent chromium for drinking water to evaluate whether the proposed regulations are inconsistent or incompatible with existing state regulations. The State Water Board determined that no other state regulation addressed the same subject matter and that this proposal, if adopted, would not be inconsistent or incompatible with existing state regulations.

**OTHER STATUTORY REQUIREMENTS**

[Gov. Code, §11346.5(a)(4)]

*California Environmental Quality Act*

[Public Resources Code, Div. 13]

The California Environmental Quality Act (CEQA) requires public agencies to consider and mitigate potentially significant environmental impacts from discretionary project approvals. Section 21159 of the Public Resources Code requires certain agencies, including the State Water Board, to perform at the time of adoption of a rule or regulation requiring a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance with the rule or regulation. To comply with CEQA, the State Water Board prepared a draft programmatic environmental impact report (EIR) analyzing the environmental impacts of the proposed regulation of hexavalent chromium in drinking water. More information about the draft EIR, including the Notice of Availability specifying the public review and comment period, is available on the State Water Board's website.

External Scientific Peer Review

[Health and Safety Code, §57004(b)]

HSC section 57004(b) requires that the scientific portions of any regulation proposed by the California Environmental Protection Agency (Cal/EPA), or any board, department, or office within Cal/EPA, be submitted to an external scientific peer review entity for evaluation. “Scientific basis” or “scientific portion” is defined as “*those foundations of a rule that are premised upon, or derived from empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirement for the protection of public health or the environment.*”

The State Water Board identified its preliminary determinations of BAT and limits of technological feasibility of treatment of hexavalent chromium in drinking water as having underlying scientific bases and requested external scientific peer review of those determinations. The peer reviewer comments and the State Water Board’s response to those comments can be found on the State Water Board’s website at:

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/SWRCBDDW-21-003\\_hexavalent\\_chromium.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SWRCBDDW-21-003_hexavalent_chromium.html).

Cal/EPA Major Regulations

[Health and Safety Code, §57005]

HSC section 57005 requires each Cal/EPA board, department, and office, before adopting any major regulation, to evaluate alternatives to the proposed regulation that would lessen adverse economic impact on California businesses and to consider whether there is a less costly alternative or combination of alternatives which would be equally as effective in achieving increments of environmental protection in a manner that ensures full compliance with statutory mandates within the same amount of time as the proposed regulations. For the purposes of HSC 57005, a “major regulation” means any regulation that would have an economic impact on California business enterprises in an amount exceeding ten million dollars. To satisfy this requirement, 20 alternative MCLs were evaluated; none was found to be equally as effective in achieving increments of environmental protection in a manner that ensures full compliance with the statutory mandates. The alternatives analysis can be found in the Initial Statement of Reasons, Attachment 2.

Health and Safety Code Requirements for Primary Drinking Water Standards

[Health and Safety Code, §116365, §116365.5, §116370]

HSC section 116365 requires that primary drinking water standards be set at a level that is as close as feasible to the corresponding public health goal, placing primary emphasis on the protection of public health. The standard must also be technologically and economically feasible. HSC section 116365.5 mandates that a primary drinking water standard be established for hexavalent chromium. HSC section 116370 requires that, when a primary drinking water standard is being adopted, a finding of BAT be adopted at the same time.



Safe, Clean, Affordable Water

[California Water Code, §106.3]

California Water Code section 106.3 states that it is the policy of the state that every human has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes, and requires the State Water Board to consider this policy when revising, adopting, or establishing regulations. In preparing the proposed regulations, the State Water Board determined the proposed regulations are consistent with this statewide policy.

Pre-Notice Meeting with Affected Parties

[Gov. Code, §11346.45]

Government Code section 11346.45(a) requires that prior to publication of the notice of proposed action, the agency proposing the regulation must involve parties who would be subject to the proposed regulations in public discussions, when the proposed regulations involve complex proposals or a large number of proposals that cannot be easily reviewed during the comment period. The regulations proposed here are neither complex nor involve large numbers of proposals that could not be easily reviewed during the comment period. Nonetheless, the State Water Board did provide PWS and water consumers opportunities to be involved in public discussions about the proposed regulations. Specifically, there have been five pre-regulation workshops held for the hexavalent chromium MCL, including a 27 April 2020 economic feasibility workshop, 8 and 9 December 2020 preliminary cost estimates workshops, and 5 and 7 April 2022 administrative draft workshops, as well as a 29 November 2021 CEQA scoping meeting. Comments, suggestions, and alternatives were solicited at each workshop and meeting, and during associated written comment periods. In addition, staff of the State Water Board's Division of Drinking Water frequently provide regulatory updates to PWS and industry groups, including the status of the proposed hexavalent chromium MCL regulation development.

**MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS**

[Gov. Code, §11346.5(a)(5)]

None.

The proposed regulations would not impose a mandate on local agencies or school districts that requires state reimbursement. The proposed regulations will not be a requirement unique to local government and will apply equally to public and private water systems.

**FISCAL IMPACT (COSTS AND SAVINGS)**

**(see Initial Statement of Reasons, Attachment 2, for methodology and calculations)**

[Gov. Code, §11346.5(a)(6)]

*Estimated Cost and Savings to State Agencies*

The initial impact of the proposed regulation on the State Water Board would be an impact on staffing resources of \$739,577, which could potentially be accommodated through redistribution of existing staff at the district office level. However, additional personnel may be needed for effective implementation and enforcement of the adopted MCL, including for tasks such as evaluating submitted compliance plans.

Compliance costs for the one state-owned PWS expected to exceed the proposed MCL have been estimated at \$95,419 per year (capital costs have been annualized). In addition, this system will also incur a one-time cost of \$7,619 to prepare compliance and operations plans.

The proposed regulation is expected to have an impact on the state's sales tax revenue, which are estimated to be \$24.1 million in 2025, \$13.2 million in 2026, \$4.5 million in 2027, and \$1.4 million in each subsequent year.

The State Water Board estimates that there will be no change to Safe Drinking Water Account fees and caps. The fees, caps, and annual adjustments are specified in statute under HSC sections 116565, 116577, 116585, and 116590.

*Reimbursable Costs to Local Agencies or School Districts*

(in accordance with Gov. Code sections 17500 through 17630)

[Gov. Code, 11346.5(a)(5)]

None.

Any costs incurred by local agencies or school districts as a result of this regulation are not reimbursable by the State pursuant to Article XIII B, section 6 of the California Constitution. Local agencies and school districts currently incur costs in their operation of PWS. The costs imposed by the proposed regulations are not the result of a "new program or higher level of service" within the meaning of Article XIII B, section 6 of the California Constitution because the proposed regulations apply generally to all individuals and entities that operate PWS in California and do not impose unique requirements on local governments (*County of Los Angeles v. State of California et al*, 43 Cal App 3d 46 (1987)). In addition, PWS can pass on the cost of regulation implementation through increasing service charges, fees, and assessments. Therefore, no state reimbursement of these costs is required. Local regulatory agencies also may currently incur additional costs for their responsibility to enforce state regulations related to small PWS (fewer than 200 service connections) that they regulate. However, local agencies are authorized to assess fees to pay reasonable expenses incurred in enforcing statutes and regulations related to small PWS (HSC §101325). Therefore, no reimbursement of any incidental costs to local agencies in enforcing this regulation would be required (Gov. Code, §17556(d)).

Other Non-discretionary Cost or Savings Imposed on Local Agencies

None.

Estimated Cost or Savings in Federal Funding of State Programs

None.

**SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESS, INCLUDING ABILITY TO COMPETE**

[Gov. Code, §11346.5(a)(7)]

The State Water Board has determined that there may be a significant, statewide adverse economic impact directly affecting businesses.

Types of Businesses Affected

[Gov. Code, §11346.5(a)(7)(A)]

These businesses may be privately owned PWS or other businesses served by affected PWS, but no data is available about the number or types of businesses served by PWS or how they are charged for water.

However, water service is provided locally and consumers generally don't have a choice of their water service supplier. PWS are generally not in competition with other systems; they are utilities that can pass costs onto their consumers. Most NTNCWS and TNCWS are wineries, packing plants, farms, restaurants, etc., with a primary business other than supplying potable water. These businesses and others facing higher water charges from their PWS may be able to pass any increased costs on to their customers, depending on their market environment.

Non-California water providers are unlikely to increase sales in California because water originating from outside of California is also subject to the requirements in the proposed regulation. For example, water imported from the Colorado River may need to be treated to comply with all MCLs before it can be served as drinking water. However, bottled water is not regulated as drinking water and only needs to comply with federal MCLs, including the 100 µg/L MCL for total chromium.

Projected Reporting, Recordkeeping, and Other Compliance Requirements

[Gov. Code, §11346.5(a)(7)(B)]

The projected reporting, recordkeeping, and other compliance requirements resulting from the proposed regulation consist of the following:

Monitoring and Reporting

- Consistent with existing regulations, PWS would be required to use specific health effects language when providing public notification of MCL violation(s);
- Monitoring by CWS, NTNC, and wholesalers of their drinking water sources for hexavalent chromium;

- Consistent with existing regulations, CWS and NTNCWS would be required to use specific language in the Consumer Confidence Report to describe the major origins of hexavalent chromium when hexavalent chromium is detected in drinking water; and
- Submitting a compliance plan if a system exceeds the MCL before the applicable compliance date.

#### Recordkeeping

- Consistent with existing regulations, PWS would be required to retain records of hexavalent chromium chemical analyses for at least the most recent ten years.
- Consistent with existing regulations, PWS would be required to retain copies of any public notices required in response to hexavalent chromium MCL exceedance for at least the most recent five years.

#### Other Compliance Requirements

- PWS would need to comply with the hexavalent chromium MCL of 10 µg/L for drinking water. Actions to comply with the MCL may include blending, the installation of treatment, drilling a new well, consolidation with another PWS, or not using a specific well at all.
- PWS would need to operate or contract with an ELAP accredited laboratory for analysis of hexavalent chromium capable of reliably quantifying to the proposed DLR using one of the methods specified.

#### Invitation to Submit Alternative Proposals

[Gov. Code, §11346.5(a)(7)(C)]

The State Water Board has made an initial determination that the adoption of this regulation may have a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. The State Water Board has considered proposed alternatives that would lessen any adverse economic impact on business and invites you to submit proposals. Submissions may include the following considerations:

- (i) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to businesses.
- (ii) Consolidation or simplification of compliance and reporting requirements for businesses.
- (iii) The use of performance standards rather than prescriptive standards.
- (iv) Exemption or partial exemption from the regulatory requirements for businesses.

#### **DETERMINATION OF EFFECT ON SMALL BUSINESSES**

[1 CCR 4]

The proposed regulation directly impacts PWS. CWS and wholesalers are water companies (utilities) providing drinking water to the public and, pursuant to Government

Code section 11342.610, are exempt from the definition of a small business in the APA. However, some NTNCWS and TNCWS (such as wineries, restaurants, and agricultural/industrial businesses) may also be considered small businesses if they are independently owned and operated, not dominant in their field of operation, and are not in an exempted category (Gov. Code section 11342.610). While some NTNCWS and TNCWS may be small businesses, the State Water Board does not currently have the data to evaluate which systems meet the criteria. Therefore, the impacts for a typical small business were estimated as the average impacts on privately owned NTNCWS and TNCWS systems.

The State Water Board also recognizes that some small businesses will be served by PWS affected by this regulation and may experience increased water costs as a result. These increased costs are indirect impacts, and are expected to be similar to those experienced by households. Depending on their market environment, these businesses may be able to pass on the increased costs to their customers.

**RESULTS OF ECONOMIC IMPACT ASSESSMENT: MAJOR REGULATION --  
STATEMENT OF RESULTS OF THE STANDARDIZED REGULATORY IMPACT  
ANALYSIS (SRIA)**

[Gov. Code, §11346.5(a)(10); §11346.3(b)(1); §11346.3(c)]

The standardized regulatory impact analysis (SRIA) is also referred to as a standardized regulatory impact assessment in Department of Finance regulations at 1 CCR sections 2000 through 2004.

*SRIA Results*

[Gov. Code, §11346.3(c)(1)]

The State Water Board determined that the economic impact of the proposed regulations would likely exceed \$50 million in a 12-month period and is therefore a major regulation as defined by California Code of Regulations, Title 1, Division 3, Chapter 1, §2000(g). The State Water Board prepared a SRIA as required by Government Code 11346.3(c).

The proposed hexavalent chromium MCL of 10 µg/L would have the following impacts on California based on the macroeconomic analysis in the SRIA: an increase in gross output of \$81 million, an increase in aggregate earnings of \$2 million, and \$53 million in value added, but a decrease of approximately 401 jobs (all compared to the baseline of not implementing a hexavalent chromium MCL). Potential MCLs at 1, 8, and 12 µg/L were evaluated as alternatives to the current proposal. While some alternatives were slightly more cost-effective than the proposed MCL of 10 µg/L, they did not provide as many health benefits. Because HSC 116365 requires that the MCL be set as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health, alternatives with similar cost-effectiveness but fewer health benefits must be rejected. An additional cost-effectiveness analysis that compared the proposed MCL to 20 alternatives also showed that 10 µg/L is the lowest the MCL can be set while avoiding large decreases in cost-effectiveness.

While many benefits of this regulation are difficult to quantify, improved public health is the primary benefit, which may be experienced as a reduction in the number of cancer cases (up to 12.8 per year) and noncancer cases (not quantifiable). Although the number of noncancer cases (liver toxicity, which can occur at hexavalent chromium concentrations above 2 µg/L) cannot be quantified, the 5.5 million people who will see hexavalent chromium concentrations reduced by an average of 32.4% are likely to see related health benefits. Additional benefits are the increased public confidence in the safety of the state's drinking water (which may also have monetary benefits for families that choose to no longer purchase bottled water or home treatment systems) and public assurance that exposure to hexavalent chromium in drinking water is at the lowest level technologically and economically feasible.

The conclusions of the SRIA were:

- (A) Creation or Elimination of Jobs [Gov. Code §11346.3(c)(1)(A)]  
Decrease of 401 jobs per year.
- (B) Creation or Elimination of Business [Gov. Code §11346.3(c)(1)(B)]  
Insignificant, estimated as 0.
- (C) Competitive Advantages or Disadvantages [Gov. Code §11346.3(c)(1)(C)]  
None.
- (D) Increase or Decrease of Investment [Gov. Code §11346.3(c)(1)(D)]  
Increased investment of \$94 million per year.
- (E) Incentives for Innovation [Gov. Code §11346.3(c)(1)(E)]  
The proposed MCL will lead to systems installing treatment technologies capable of removing hexavalent chromium from their water. Systems' search for effective technologies will drive innovation.
- (F) Benefits of the Proposed Regulations [Gov. Code §11346.3(c)(1)(F)]  
Primary benefits are improved public health.

Department of Finance SRIA Comments and State Water Board Responses  
[Gov. Code, 11346.3(f)]

The SRIA was submitted to the Department of Finance (DOF) on 13 December 2022. DOF provided comments to the State Water Board on 12 January 2023. DOF generally concurred with the State Water Board's methodology in the SRIA, except for four comments. The four comments, and the State Water Board's response to those comments, are as follows:

Comment 1: First, the SRIA must disclose estimates of all fiscal impacts to state and local governments, including any potential revenue impacts such as any increased sales tax from the purchase and installation of testing and treatment equipment and materials they purchase in California – for example, the capital costs of \$95 million in 2028 could increase sales tax revenue by around \$7.8 million (assuming an average tax rate of 8.2 percent).

Response: *Calculations for local and state sales tax revenue have been added to the updated SRIA (ISOR Attachment 2) in sections D.1.b and D.2.c, respectively. These items have also been added to the Form STD-399 Fiscal Impact Statement section.*

Comment 2: Second, the SRIA must discuss the disparate impacts of the regulations on identifiable groups of individuals and businesses. While the SRIA separates into quartiles the numbers of individuals whose monthly water bills would increase by different amounts, the SRIA does not provide information on the population in each quartile, nor does it discuss the potential of the projected increases to be particularly burdensome for individuals for whom water expenses are a higher proportion of total household expenses.

Response: *To the extent that data allowed, section C.5 of the SRIA was updated to include information on identifiable groups of individuals in each of the quartiles, including the estimated populations of each quartile affected. However, the State Water Board does not collect or have information about the businesses served by water systems or how those businesses are charged for water, so only general statements could be made regarding businesses. The updated SRIA now explicitly acknowledges that any increase in household costs will necessarily be more burdensome for individuals for whom such expenses are already a higher proportion of total household expenses. Section 11 of the ISOR also contains information about the costs to individuals served by water systems of different sizes and funding options that are available to alleviate burdensome costs.*

Comment 3: Third, the SRIA must provide the rationale underlying any assumptions that are material to the analysis. The SRIA is missing rationale for some assumptions including but not limited to the following:

Comment 3a: Future costs are discounted at a 7 percent rate rather than a lower rate such as 3 percent. Since higher discount rates lead to lower cost estimates, the SRIA must disclose why 7 percent is the most appropriate discount rate for this regulation or provide a sensitivity analysis showing how different discount rates affect the impact estimates.

Response: *Section I.3.c.2 of the SRIA was updated to include rationale and sources for the rate of 7%. However, this was an interest rate, not a discount rate (the text has also clarified this point). Lower interest rates lead to lower cost estimates, making 7% more conservative than 3%.*

Comment 3b: The SRIA implicitly assumes that water systems that did not previously test for hexavalent chromium will not incur any compliance costs. The SRIA notes that the number of affected systems could increase as testing is adopted yet bases future cost estimates on only the number of systems currently known to be out of compliance. The SRIA must either explain why it assumes that the untested systems will not incur costs to comply with the regulation or provide a sensitivity analysis showing how

different assumptions about hexavalent chromium concentrations among untested water systems will affect the regulation's impact estimates.

*Response: Section A.2 of the SRIA has been updated to explain that the majority of sources that have not tested are TNCWS sources and will not be required to test, and therefore, will not incur costs to comply with this regulation. Of all sources that would be required to test for hexavalent chromium by this regulation, only 4.6% of groundwater sources and 6.3% of surface water sources have not already tested. The extensive variability between sources, including but not limited to such factors as local geology, historic regional use of products or processes that contribute to the formation or deposition of hexavalent chromium, and the necessity of a source to a PWS, creates significant challenges to accurately extrapolate the extent of further contamination, any additional need for treatment, and the costs of such treatment. In addition, the cost estimates developed for this regulation rely on the contamination level of each source, which is not available for any untested sources. For these reasons, the State water Board did not attempt to predict how many additional sources may require treatment for hexavalent chromium and is instead relying on the known hexavalent chromium concentrations in drinking water sources to calculate costs.*

### **COST IMPACTS ON A REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

[Gov. Code, §11346.5(a)(9)]

The proposed regulation does not impose any direct costs on individuals served by the affected PWS or on any other individual in California (this regulation only applies to PWS, not private wells). However, the affected PWS are likely to pass on some or all of their increased costs to the households or businesses that they serve, likely in the form of higher monthly water bills. Thus, based on current monitoring data, it is expected that 5.3 million individuals – approximately 14% of California's population – would experience water cost increases. For the majority of people (84%), the increases will likely be less than \$20 per month. Increases will likely be higher for those served by small PWS. As is the case with most increases in household costs, increases will be more burdensome for individuals for whom such expenses are already a higher proportion of total household expenses.

Detailed breakdowns of cost impacts to individuals are provided in section 11 of the ISOR and in section C.5 of the SRIA (ISOR Attachment 2).

### **BUSINESS REPORTS**

[Gov. Code, §11346.5(a)(11); §11346.3(d)]

Government Code subsection 11346.36(d) requires that any administrative regulation adopted on or after January 1, 1993, that requires a report shall not apply to businesses, unless the state agency adopting the regulation makes a finding that it is necessary for health, safety, or welfare of the people of the state that the regulation apply to businesses. To the extent that this regulation requires reporting of businesses, that reporting is necessary for the health, safety, or welfare of the people of the state.



The only businesses that would be subject to the proposed regulations are those which are also PWS as defined in HSC section 116275.

### **HOUSING COSTS**

[Gov. Code, §11346.5(a)(12)]

The State Water Board has determined that the regulations will have no impact on housing costs.

### **CONSIDERATION OF ALTERNATIVES**

[Gov Code, §11346.5(a)(13)]

Based upon the analysis of the proposed regulations in the SRIA as well as the benefits identified, the State Water Resources Control Board must determine that no reasonable alternative it considered or that has otherwise been identified and brought to its attention would be:

- more effective in carrying out the purpose for which the action is proposed,
- would be as effective and less burdensome to affected private persons than the proposed action, or
- would be more cost-effective to affected private persons and equally effective in implementing the statutory policies or other provisions of law.

As described in detail in the SRIA, the State Water Board estimated costs and benefits associated with 20 alternative potential MCLs: from 1 to 15, 20, 25, 30, 35, 40, and 45 µg/L. The State Water Board invites interested persons to present statements or arguments with respect to alternatives to the proposed regulation at the scheduled hearing or during the written comment period.

### **FORMS OR DOCUMENTS INCORPORATED BY REFERENCE**

[CCR Title 1, Div. 1, Ch. 1, §20(c)(3)]

The following documents are incorporated by reference in the proposed regulations as it would be too cumbersome, unduly expensive, or impractical to publish these documents into regulation because of their length. Specifically,

- 1) U.S. EPA. (1994). Method 218.6: Determination of Dissolved Hexavalent Chromium in Drinking Water, Groundwater, and Industrial Wastewater Effluents by Ion Chromatography, Rev. 3.3 is approximately 16 pages in length; and
- 2) U.S. EPA (2011). Method 218.7: Determination of Hexavalent Chromium in Drinking Water by Ion chromatography with Post-Column Derivatization and UV-Visible Spectroscopic Detection is approximately 31 pages in length.

## STATE WATER BOARD CONTACT PERSONS

[Gov. Code, §11346.5(a)(14)]

Requests for copies of the proposed regulatory text, the Initial Statement of Reasons, subsequent modifications of the proposed regulatory text, if any, or other inquiries concerning the proposed action may be directed to:

Melissa Hall, P.E.  
Senior Water Resource Control Engineer  
State Water Resources Control Board, Division of Drinking Water  
(916) 323-0373  
Email address: [melissa.hall@waterboards.ca.gov](mailto:melissa.hall@waterboards.ca.gov)

In the event Miss Hall is not available to respond, please contact:

Bethany Robinson, PhD  
Water Resource Control Engineer  
State Water Resources Control Board, Division of Drinking Water  
(510) 620-6285  
Email address: [bethany.robinson@waterboards.ca.gov](mailto:bethany.robinson@waterboards.ca.gov)

**Please identify the action by using the State Water Board regulation package identifier, “SWRCB-DDW-21-003: Hexavalent Chromium MCL” in any inquiries.**

## WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS

[Gov. Code, § 11346.5(a)(15)]

Any interested person, or their representative, may submit written comments relevant to the proposed regulatory action to the Clerk to the State Water Board. Any written comments pertaining to these proposed regulations, regardless of the method of transmittal, must be received by the Clerk by 12:00 p.m. (noon) on **4 August 2023**, which is hereby designated as the close of the written comment period. Comments received after this time will not be considered timely. Written comments may be submitted via any of following methods:

1. By electronic mail to: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov);
2. By facsimile (“fax”) transmission to: (916) 341-5620;
3. By mail to:  
Courtney Tyler, Clerk to the Board  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-2000; or
4. By hand-delivery to:  
Courtney Tyler, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, CA 95814.

To facilitate timely identification and review, please identify the action by using the State Water Board regulation package identifier, “**SWRCB-DDW-21-003: Hexavalent Chromium MCL**” in any written comments.

The State Water Board requests but does not require that written comments sent by mail or hand-delivered be submitted in triplicate.

The State Water Board requests but does not require that, if reports or articles in excess of 25 pages are submitted in conjunction with the comments, the commenter provide a summary of the report or article and describe the reason for which the report or article is being submitted or its relevance to the proposed regulation.

All comments, including e-mail or fax transmissions, should include the author’s name and U.S. Postal Service mailing address in order for the State Water Board to provide copies of any notices for proposed changes to the regulation text or rulemaking file on which additional comments may be solicited. Please note that under the California Public Records Act (Gov. Code, §7920.000 *et seq.*), written and oral comments, attachments, and associated contact information (*e.g.*, your address, phone, email, *etc.*) become part of the public record and can be released to the public upon request.

Due to the limitations of the e-mail system, emails larger than 15 megabytes (MB) may be rejected and will not be delivered and received by the State Water Board. Therefore, emails larger than 15 MB should be submitted under separate emails or via another form of delivery.

#### **AVAILABILITY OF INITIAL STATEMENT OF REASONS, TEXT OF PROPOSED REGULATIONS, AND THE RULEMAKING FILE**

[Gov. Code, §11346.5(a)(16)]

The State Water Board has prepared and has available for public review an initial statement of reasons for the proposed regulations, all the information upon which the proposed regulations are based, the text of the proposed regulations, EIR, and all other required forms, statements, and reports. The Regulatory Development Unit, Division of Drinking Water, State Water Resources Control Board, 1001 I Street, 17<sup>th</sup> Floor, Sacramento, CA 95814, will be the location for inspection and copying of public records, including reports, documentation, and other material related to the proposed regulations (rulemaking file) throughout the rulemaking process.

Upon specific request, these documents will be made available in Braille, large print, or CD (compact disk). In order to request that a copy of this public notice, the regulation text, and the initial statement of reasons be mailed or emailed to you in an alternative format, please call (916) 341-5611 (or the California Relay Service at 711) or send an email to [board.clerk@waterboards.ca.gov](mailto:board.clerk@waterboards.ca.gov).

**AVAILABILITY OF CHANGED OR MODIFIED TEXT**

[Gov. Code, §11346.5(a)(18)]

After holding the hearing and considering relevant comments received in a timely manner, the State Water Board may adopt the proposed regulations as described in this notice. If the State Water Board makes modifications that are substantially related to the originally proposed text, the State Board will make the modified text – with changes clearly indicated – available to the public for at least 15 days before the State Water Board adopts the modified regulations. Any such modifications will also be posted on the State Water Board Web site. Please send requests for copies of any modified regulations to the attention of the contact persons provided above (“Contact Persons”). The State Water Board will accept written comments on the modified regulation for 15 days after the date on which they were made available.

**AVAILABILITY OF FINAL STATEMENT OF REASONS**

[Gov. Code, §11346.5(a)(19)]

The State Water Board will prepare a final statement of reasons pursuant to Government Code section 11346.9 after final adoption of the regulations. Please direct requests for copies of the final statement of reasons to the attention of the contact persons listed above (“Contact Persons”).

**AVAILABILITY OF DOCUMENTS ON THE INTERNET**

[Gov. Code, §11346.4(a)(6); §11346.5(a)(20)]

Copies of this Notice of Proposed Rulemaking, the Initial Statement of Reasons, and the text of the regulations may be found on the State Water Board’s Web site at the Division of Drinking Water’s Hexavalent Chromium MCL Internet Web Page at: [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/SWRCBDDW-21-003\\_hexavalent\\_chromium.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SWRCBDDW-21-003_hexavalent_chromium.html).

\_\_\_\_\_  
June 16, 2023  
Date

  
\_\_\_\_\_  
Courtney Tyler  
Clerk to the Board