State Water Resources Control Board
Division of Drinking Water

FINAL STATEMENT OF REASONS

ATTACHMENT 1

Comments and Responses to Comments
Hexavalent Chromium Maximum Contaminant Level (MCL) Regulation

BACKGROUND

The following will facilitate review of the comments and responses to comments on the proposed Hexavalent Chromium Maximum Contaminant Level (MCL) regulation:

- The initial written comment period for the proposed regulation began on 16 June 2023 and ended at 12:00 p.m. (noon) on 18 August 2023.
    - Email announcements including the Notice of Proposed Rulemaking (available in English and Spanish) were sent to subscribers of the following State Water Board email lists:
        - Board Meetings, Board Workshops, and Regulations – General: 7,031 combined recipients on 16 June 2023.
        - Drinking Water Program Announcements and Drinking Water Public Water Systems: 13,012 combined recipients on 16 June 2023.
        - Environmental Laboratory Accreditation Program (ELAP): 2,193 recipients on 19 June 2023.
    - Email announcements including the First Revised Notice (to update the hearing location, available in English and Spanish) were sent to subscribers of the following State Water Board email lists:
        - Board Meetings, Board Workshops, Drinking Water Program Announcements, and Regulations – General: 9,724 combined recipients on 21 July 2023.
    - Email announcements including the Second Revised Notice (to extend the public comment period and add an errata sheet to the ISOR) were sent to subscribers of the following State Water Board email lists:
        - Board Meetings, Board Workshops, Drinking Water Program Announcements, and Regulations – General: 9,727 combined recipients on 1 August 2023.
    - Email announcements including the Third Revised Notice (to extend the public comment period) were sent to subscribers of the following State Water Board email lists:

        - Board Meetings, Board Workshops, Drinking Water Program Announcements, and Regulations – General: 9,732 combined recipients on 4 August 2023.
        - Drinking Water Public Water Systems: 8,980 recipients on 10 August 2023.
    - Final responses to all oral and written comments received before the 18 August 2023 comment period deadline (including during the 2 August 2023 Board hearing) are in sections A through J of this document.
- A 15-day comment period beginning 22 November 2023 and ending at 12:00 p.m. (noon) on 15 December 2023 for changes to the proposed regulation text and an addendum to the ISOR.
    - Email announcements including the Notice of Public Availability of Changes to Proposed Regulations (available in English and Spanish) were sent to subscribers of the following State Water Board email lists:
        - Drinking Water Public Water Systems: 8,950 recipients on 22 November 2023.
        - Individuals and entities that provided comments during the prior notice period: 159 recipients on 27 November 2023.[1,2]
    - U.S. mail announcements were sent to individuals and entities that provided comments during the prior notice period: 117 recipients on 27 November 2023.[2,3]
    - Final responses to all written comments received before the comment deadline are in section K of this document.
- A 15-day comment period beginning 31 January 2024 and ending at 12:00 p.m. (noon) on 19 February 2024 for additions to the Documents Relied Upon.
    - Email announcements including the Notice of Public Availability of Additional Documents Relied Upon (available in English and Spanish) were sent to subscribers of the following State Water Boards email lists:
        - Drinking Water Public Water Systems: 11,146 recipients on 1 February 2024.

[1] Some notices were re-sent on a later date (usually within a day or two) if the original email address needed correction.
[2] Some physical addresses provided by signatories to a comment letter organized by a community organization were illegible or incomplete; therefore, these community organizations were sent emails requesting that they pass on the information to their membership and others that they knew would be interested.
[3] Notices to some individuals were returned as undeliverable from the US Postal Service. Corrected addresses for some signatories were found and subsequently sent notices at a later date.

        - (corrected email) Drinking Water Public Water Systems: 8,905 recipients on 1 February 2024.
        - Individuals and entities that provided comments during any prior notice period(s): 167 recipients on 1 February 2024. [1,2]
    - U.S. mail announcements were sent to individuals and entities that provided comments during the prior notice periods: 118 recipients on 1 February 2024.[2,3]
    - Email announcements including the Revised Notice (to extend the public comment period and include an attachment, available in English and Spanish) were sent to subscribers of the following State Water Board email lists:
        - Board Meetings, Board Workshops, Drinking Water Program Announcements, and Regulations – General: 10,147 combined recipients on 14 February 2024.
        - Drinking Water Public Water Systems: 8,903 recipients on 14 February 2024.
        - Individuals and entities that provided comments during any prior notice period(s): 167 recipients on 14 February 2024.[1,2]
    - U.S. mail announcements were sent to individuals and entities that provided comments during the prior notice periods: 118 recipients on 15 February 2024.[2,3]
    - Final responses to all written comments received before the comment deadline are in section L of this document.
- Two response letters were written and sent to individual commenters during the rulemaking process:
    - Response dated 1 August 2023 to Timothy Worley (FSOR Attachment 2).
    - Response dated 5 April 2024 to Senator Anna Caballero et al. (FSOR Attachment 3).
- A Draft Responsive Summary of some comments was provided as part of the agenda materials for the 17 April 2024 State Water Board adoption meeting.
- Parties from whom written and oral comments were received are listed below with the general comment categories for which they provided comments.
- Notices, announcements, and other documents related to the proposed MCL for hexavalent chromium were posted to the State Water Board's hexavalent chromium rulemaking webpage at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SWRCBDDW-21-003_hexavalent_chromium.html with a corresponding bulletin on the Drinking Water Announcements webpage at https://www.waterboards.ca.gov/drinking_water/programs/.

The following is a list of acronyms, initials, and abbreviations used in this document and their meanings (this list does not include those associated with commenter organizations):

- APA – Administrative Procedure Act
- BAT – Best Available Technology
- CCR – California Code of Regulations
- CEQA – California Environmental Quality Act
- CEM – Cost Estimating Methodology
- CFR – Code of Federal Regulations
- Cr(VI) – hexavalent chromium
- CWS – Community Water System
- DAC – Disadvantaged Community
- DDW – Division of Drinking Water
- DOF – (California) Department of Finance
- EIR – Environmental Impact Report
- ELAP – Environmental Laboratory Accreditation Program
- FDA – (United States) Food and Drug Administration
- FSOR – Final Statement of Reasons
- gpcd – gallons per capita per day
- gpm – gallons per minute
- HPC – health-protective concentration
- HSC – (California) Health and Safety Code
- ISOR – Initial Statement of Reasons
- MAC – Modified Activated Carbon
- MCL – Maximum Contaminant Level
- µg/L – micrograms per liter (equivalent to ppb)
- NSF/ANSI – National Sanitation Foundation/American National Standards Institute
- NTNCWS – Non-Transient Non-Community Water System
- OEHHA – Office of Environmental Health Hazard
- OSHA – Occupational Safety and Health Administration
- PCE – tetrachloroethylene

- PHG – Public Health Goal
- POTW – Publicly-owned Treatment Works
- POU/POE – Point-of-Use/Point-of-Entry
- ppb – parts per billion (equivalent to µg/L)
- PWS – Public Water System(s)
- RCF – Reduction/Coagulation/Filtration
- RWQCB – Regional Water Quality Control Board
- SAFER – Safe and Affordable Funding for Equity and Resilience
- SRIA – Standardized Regulatory Impact Assessment
- SWRCB – State Water Resources Control Board
- TCE – trichloroethylene
- TNCWS – Transient Non-Community Water System
- U.S. EPA – United States Environmental Protection Agency

A list of commenters is available in Table 1, along with the number associated with each commenter (used in the *Individual Comments* lines of this document), the date(s) their comments were received, and which categories their comments fell into. Table 2 shows an index of comment categories and the page numbers on which each category begins.

Table 1. List of Commenters

Commenters	#	Date Received	Comment Categories
American Chemistry Council	1	8/16/2023	D
American Chemistry Council, California Association of Winegrape Growers, California Cement Manufacturers Environmental Coalition, California Chamber of Commerce, California Construction and Industrial Materials Association, California League of Food Producers, California Manufacturers & Technology Association, Partnership for Sound Science in Environmental Policy, Plumbing Manufacturers Association, Western Growers, and Western Wood Preservers Institute	2	8/18/2023	A, B, D, E, F, H, J
Aqua Metrology Systems Limited	3	8/5/23, updated 8/9/23	B, J
Association of California Water Agencies (ACWA), California Municipal Utilities Association (CMUA), California-Nevada Section of the American Water Works Association (CA-NV AWWA), and California Water Association (CWA)	4	8/18/2023; 12/14/2023	A, B, C, E, F, J, K
Beaumont-Cherry Valley Water District	5	8/15/2023; 3/4/2024	C, H, J, L
California Association of Sanitation Agencies (CASA)	6	8/18/2023	J

Commenters	#	Date Received	Comment Categories
California Chamber of Commerce	7	8/18/2023	A, D, E, H
California Manufacturers & Technology Association (CMTA)	8	8/18/2023	A, E
Central Valley Clean Water Association (CVCWA)	9	8/18/2023	A, E, J
City of Dixon	10	8/16/2023; 12/15/2023	C, F, H, K
City of Patterson	11	8/18/2023	C, E, F, H, J
City of Woodland Utility Engineering	12	8/11/2023; 12/15/2023	A, B, C, D, E, H, J, K
Coachella Valley Water District	13	8/17/2023; 12/14/2023	A, B, C, D, E, F, I, J, K
Community Members from El Comite para tener agua sana, limpia y económica (ECTASLE), Gente Organizada Trabajando por el Agua (GOTA), Asociación de Gente Unida por el Agua (AGUA), and other CA communities	14	8/18/2023	A, E, G
Community Water Center, La Asociación de Gente Unida por el AGUA, Clean Water Action, Physicians for Social Responsibility Los Angeles, Integrated Resource Management, Erin Brockovich, Inc, Environmental Working Group, Tuolumne River Trust, Leadership Counsel for Justice and Accountability, Center for Public Environmental Oversight, California Coastkeeper Alliance, Breast Cancer Prevention Partners, California Indian Environmental Alliance, California Environmental Voters, Sierra Club California, Natural Resources Defense Council, and CALPIRG Education Fund	15	8/18/2023	A, B, C, D, E, F, G, J
Community Water Systems Alliance (CWSA)	16	8/18/2023	A, C, D, E, F, J
Del Amo Action Committee	17	8/15/2023	A, B, D
Hidden Valley Lake Community Services District	18	8/11/2023	A, C, D, E, H
Howard Jarvis Taxpayers Association	19	8/17/2023	E, F, H
Lagerlof Lawyers, LLP (on behalf of Chanac Creek Mutual Water Company)	20	8/18/2023	A, E, F
Metropolitan Water District of Southern California	21	8/15/2023	A, B, C, F, J
Mission Springs Water District	22	8/18/2023; 12/14/2023	A, B, C, E, F, H, J, K
Oak Trail Ranch Mutual Water Co., Inc.	23	8/16/2023	A, J
Residents of Eastern Coachella Valley and the Imperial Valley	24	8/18/2023	A, B, E, F
Solano County Taxpayers Association	25	8/17/2023; 3/4/2024	D, E, H, L
Soquel Creek Water District	26	8/16/2023	B, C, E, F, J
Twentynine Palms Water District	27	8/18/2023	C, E, F, J
Water Quality Association (WQA) and Pacific Water Quality Association (PWQA)	28	8/17/2023	A, I
Yolo County Taxpayers Association (YCTA)	29	8/18/2023	A, D, E, H
Andrea Abergel	30	8/2/23 (oral)	A, B, C, E, F, J
Salma Alatorre	31	8/2/23 (oral)	E

Commenters	#	Date Received	Comment Categories
Rosabel Bejar	32	8/2/23 (oral)	A
Norman Benson	33	8/2/23 (oral); Postmarked 8/15/23	A, D, E, F, H, I, J
Nick Blair	34	8/2/23 (oral)	A, B, C, E, F, H, J
Thom Bogue, Dixon City Councilman	35	8/2/23 (oral)	A, D, J
Sonora Bouey	36	8/18/2023	A, B, E
Erin Brockovich	37	8/2/2023	A, B, D, E, I, J
Jesus Calvillo	38	8/2/23 (oral)	G
Karina Cervantez	39	8/2/23 (oral)	A, C, F
Michael Claiborne	40	8/2/23 (oral)	A, B, C, E, F
Eileen Conneely	41	8/2/23 (oral)	D
Valentin Cornejo	42	8/2/23 (oral)	G
Castulo Estrada	43	8/2/23 (oral)	A, B, C
Edmund Fitzgerald	44	8/2/23 (oral)	A, D, E, H, J
Oracio Gonzalez	45	8/2/23 (oral)	A, B, E
Mayra Hernandez	46	8/2/23 (oral)	A
Trudi Hughes	47	8/2/23 (oral)	A, D, E
Kelli Hutton	48	8/2/23 (oral)	G
Kyle Jones	49	8/2/23 (oral)	A, E, G, J
Antonio Juaregui	50	8/2/23 (oral)	G
Joanne Le	51	8/2/23 (oral)	A, B, C, E
Paul G. Lego	52	8/17/2023; 3/4/2024	A, E, H
Marciela Mares-Alatorre	53	8/2/23 (oral)	G
Evangelina Marujo	54	8/2/23 (oral)	A, E, G
Nydia Medina	55	8/2/23 (oral)	E
Jesus “Tutuy” Montes	56	8/2/23 (oral)	G
Maria Luisa Munoz	57	8/2/23 (oral)	A, E
Yasmeen Nubani	58	8/2/23 (oral)	A, E, J
Oscar Ortiz, Mayor of the City of Indio	59	8/2/23 (oral)	A, B, D, F
Bryan Osorio	60	8/2/23 (oral)	F, G
Michael Prado, Sr.	61	8/2/23 (oral)	E
Becky Quintana	62	8/2/23 (oral)	E
Gerald Rounds	63	8/16/2023	A, D, E, H
Uriel Saldivar	64	8/2/23 (oral)	E, G
Raquel Sanchez	65	8/2/23 (oral)	G
Yesenia Segovia	66	8/2/23 (oral)	E
Rob Spiegel	67	8/2/23 (oral)	A, E, F
Mike Steinbock	68	8/10/2023	I
Linda Ullrich	69	8/9/2023	E, G
Andria Ventura	70	8/2/23 (oral)	A, E, G, J
Jared Voskuhl	71	8/2/23 (oral)	A, J
James Ward, Dixon City Treasurer	72	8/2/23 (oral)	A, F, H

Commenters	#	Date Received	Comment Categories
Tim Worley	73	8/2/23 (oral)	A, C, D, E, F, J
American Chemistry Council, California Association of Winegrape Growers, California Chamber of Commerce, California League of Food Producers, California Manufacturers & Technology Association, Partnership for Sound Science in Environmental Policy, Plumbing Manufacturers International, Western Growers Association, Western Wood Preservers Institute	74	12/15/2023; 3/4/2024	K, L
California Association of Mutual Water Companies and Community Water Systems Alliance	75	12/15/2023; 3/4/2024	K, L
California Legislature	76	12/15/2023	K
City of Los Banos	77	12/14/2023	K
Coachella Valley Regional Water Management Group	78	12/15/2023	K
Desert Water Agency	79	12/15/2023	K
Indio Water Authority	80	12/15/2023	K
Paradise Lake Mutual Water Company	81	12/14/2023	K
Rural Community Assistance Corporation	82	12/8/2023	K
Santa Ynez Rancho Estates Mutual Water Company	83	12/14/2023	K
SWRCB Water Treatment Operator, Ryan Kuntz	84	11/26/2023	K
American Water Works Association, California-Nevada Section	85	3/4/2024	L
Adam Wachtel	86	3/4/2024	L
San Andreas Mutual Water Company and Santa Cruz County Water Advisory Commission	87	3/4/2024	L
ToxSorb Ltd	88	2/15/2024	L
Becky Steinbruner	89	3/4/2024	L

Table 2. Comment Categories

Comment Category	Category Topic	Page
A	General; Other	9
B	Best Available Technology (BAT)	21
C	Compliance Schedule	25
D	Public Health Goal (PHG)[4] and Health Benefits	28
E	Economic Feasibility	37
F	Funding	50
G	Recommending Lower MCL	54
H	Recommending Higher MCL; Objecting to Adoption of MCL	57
I	Analytical Methods, Monitoring, and Detection	60
J	Standardized Regulatory Impact Assessment (SRIA)	61

[4] Category D also includes comments that oppose the MCL based on PHG concerns.

SUMMARY OF COMMENTS AND RESPONSES TO COMMENTS

Summarized comments are in plain text, with responses in *italicized text*.

A. General; Other

1. Commenters provide background information on themselves, other commenters, and/or the hexavalent chromium regulation.

   Response: *The comment is noted.*

   Commenters: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 39, 40, 43, 47, 49, 51, 52, 59, 62, 63, 67, 70, 71, 72, 73.

2. Commenters support the proposed regulation and a hexavalent chromium maximum contaminant level (MCL) of 10 micrograms per liter (µg/L).

   Response: *The support is appreciated.*

   Commenters: 17, 21, 28.

3. Commenters are concerned about environmental impacts and/or request an analysis of potential environmental impacts, such as hazardous waste production from treatment.

   Response: *The environmental impacts of compliance with the proposed regulation have been analyzed in the Environmental Impact Report (EIR) prepared in connection with this rulemaking. The EIR was made available to the public and is available on the State Water Board's website at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SWRCBDDW-21-003_hexavalent_chromium.html and was certified at the 17 April 2023 meeting of the State Water Board.*

   Commenters: 22, 58.

4. Commenter requests live interpretation for oral comments at public hearings in the future.

   Response: *It is unfortunate that live interpretation for oral comments was not possible at the 2 August 2024 Administrative Procedure Act (APA) public hearing for the State Water Board audio/visual and translation teams. Please contact the Office of Public Participation with this request (email: OPP-Contact@waterboards.ca.gov).*

Commenter: 57.

5. Commenters acknowledge that an external scientific peer review was conducted for best available technologies (BAT); however, they state that this is not the only scientific aspect of the MCL, so compliance with Health and Safety Code (HSC) 57004 has not occurred. Specifically, one commenter pointed out that the State Water Board is required to set an MCL at a level that, among other things, "avoids any significant risk to public health," which they state should be the scientific basis of the rule. That commenter also stated that any reliance on the external scientific peer review conducted for the Office of Environmental Health Hazard's (OEHHA's) 2011 PHG would be arbitrary and capricious. For these reasons, commenters would like the proposed level of 10 µg/L to be externally scientifically peer reviewed.

   Response: *Whether an agency proposed rule requires external scientific peer review depends on whether the rule has a "scientific basis" or "scientific portions" that have not previously been peer reviewed in a manner consistent with HSC 57004. "Scientific basis" and "scientific portions" mean the "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" (HSC 57004). The scientific basis or portions of the proposed rulemaking are the public health goal (PHG) and the determination of BAT. Because the 2011 PHG has already been subjected to an external scientific peer review consistent with HSC 57004, it does not need to be reviewed again for this rulemaking. The PHG is the level of a contaminant that "avoids any significant risk to public health" (see HSC 116365(c)(1)). The State Water Board submitted the preliminary BAT determinations to an external scientific peer review, in accordance with HSC 57004, prior to adoption of the proposed regulation. Therefore, the State Water Board has complied with HSC 57004 in adopting the proposed regulations.*

   Note that the adoption of an MCL does not depend solely on scientific determinations, but also on policy considerations, particularly when determining feasibility. In setting the MCL value, the State Water Board is statutorily required to consider a variety of factors (technological and economic feasibility as required by HSC 116365), including policy considerations of feasibility, when setting the MCL value; therefore, the MCL is not determined strictly on a scientific basis as commenters suggest.

   Consistent with HSC 57004, external scientific peer review is not required when the State Water Board considers policy and makes policy judgments, including determinations of the economic feasibility of an MCL

   Commenters: 2, 13.

6. Commenters ask if information regarding contaminated groundwater plumes can be provided to private well owners.

   Response: *Information on groundwater quality in California can be found on the State Water Board's Ground Water Ambient Monitoring Program, Online Tools*

webpage at https://www.waterboards.ca.gov/gama/online_tools.html. In addition, more information on the site cleanup programs can be found on the State Water Board's Division of Water Quality, Site Cleanup Programs webpage at https://www.waterboards.ca.gov/water_issues/programs/site_cleanup_program/, including links to the individual cleanup programs for the regional water quality control boards (RWQCBs). The California Department of Toxic Substances Control may also have useful information regarding specific cleanup sites on their website at https://dtsc.ca.gov/smrp-projects/.

Commenter: 17.

7. Commenter states that the proposed regulation will make public water systems (PWS) provide bottled water that meets the federal (not state) standard.

   Response: *The proposed regulation does not require PWS to provide bottled water.*

   Commenter: 33.

8. Commenter would like to know why this rulemaking is based on the historical dumping of waste by PG&E ("the Erin Brockovich scenario"). Commenter would like to see the causes of hexavalent chromium.

   Response: *The proposed regulation is required by HSC 116365. The Initial Statement of Reasons (ISOR) section 3.1 (p.4) notes that the presence of hexavalent chromium in California drinking water sources may be naturally occurring or caused by industrial activities that used hexavalent chromium. These industrial activities include manufacturing of textile dyes, wood preservation, leather tanning, and anti-corrosion processes, where hexavalent chromium contaminated waste migrated into groundwater.*

   Commenter: 44.

9. Commenter invites the State Water Board members to come to the Central Valley and drink the water there.

   Response: *The invitation was received and understood to reflect the commenter's desire for better water quality.*

   Commenter: 57.

10. Commenter urges the State Water Board to support safe and clean drinking water so that children do not suffer the consequences of contamination.

    Response: *The comment is appreciated.*

    Commenter: 32.

11. Commenters request that the Human Right to Water (Water Code, § 106.3 added by Assembly Bill 685 of 2012) should be considered in adopting the proposed MCL by analyzing how the proposed MCL levels will contribute to efforts to provide clean, safe, and affordable drinking water to ensure safe water as a human right. Some commenters add that the proposed standard is not safe, and other commenters state the proposed standard is not affordable. One commenter states that the State

Water Board's failure to engage in a more detailed economic feasibility analysis violates the Human Right to Water.

Response: *It is the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes (Water Code 106.3). The State Water Board has considered this policy when adopting the proposed regulation, as stated in ISOR sections 11.3 and 11.11. The adoption of the proposed regulation advances the human right to water by setting a primary drinking water standard for hexavalent chromium that is protective of public health, while minimizing negative impacts to affordability and accessibility. Adoption of the proposed regulation would improve the safety of drinking water from PWS in California by prohibiting hexavalent chromium above the proposed MCL of 10 µg/L. As described in the ISOR, the proposed regulation would reduce the risk of cancer and health effects from liver toxicity due to hexavalent chromium (ISOR section 5.2.1). Please see Responses A-35 and E-29 regarding the assessment of affordability.*

Commenters: 2, 8, 14, 54.

12. Commenter would like the proposed regulation to account for projects that were already constructed to comply with the previous attempt at setting an MCL for hexavalent chromium.

    Response: *Already constructed projects were considered in evaluating technological feasibility and BAT (ISOR section 10.2; BAT peer review request). Consistent with State Administrative Manual section 6600, ISOR Attachment 2 (Standardized Regulatory Impact Assessment (SRIA)) section A.2 describes the baseline used for the proposed regulation. When estimating costs for this regulation, previously installed hexavalent chromium treatment was not accounted for (subtracted from calculated compliance costs) because of uncertainty and inconsistencies in the data regarding those treatment plants. While some PWS continued to use installed treatment for hexavalent chromium, some discontinued or lessened the treatment, and others put partially completed treatment plans on hold.*

    Commenter: 12.

13. Commenter states that this regulation is not just about setting a drinking water MCL in California but setting a national standard that protects public health and may be adopted by other states.

    Response: *The comment is appreciated. However, standards adopted by other states are out of the scope of this regulation.*

    Commenter: 37.

14. Commenter requests action on plans for full-scale implementation of stannous chloride treatment submitted for review in January 2023 to the State Water Board's Division of Drinking Water Division 20.

Response: *This request is outside of the scope of the proposed regulation. The commenter has since received a response to their submitted plans from the State Water Board's Division of Drinking Water, dated 27 September 2023.*

Commenter: 13.

15. Commenters state that the Food and Drug Administration (FDA) requires that food processors meet all drinking water standards.

    Response: *Food processors are required to meet certain federal standards, and there currently is no federal standard for hexavalent chromium. The FDA requires that "Any water that contacts food or food-contact surfaces shall be safe and of adequate sanitary quality" (21 Code of Federal Regulations (CFR) 110.37). The California Retail Food Code requires that "water meet standards for transient noncommunity systems, to the extent permitted by federal law," which only requires that water quality meet nitrate/nitrite and bacteria standards, including compliance with the ground water rule and surface water treatment rules (see HSC 113869, defining "potable water"). Therefore, compliance with the hexavalent chromium MCL is not required by food processors, unless the processing plant is considered a non-transient PWS because it serves 25 people (such as employees) over six months per year. As compliance with the MCL is not required by food processors, additional costs to food processors who voluntarily choose to comply with the MCL (for reasons such as "customer and public perceptions of food safety," as stated by Katie Little from the California League of Food Producers at the adoption meeting; see transcript of 17 April 2024 Board meeting, p.114, lines 8-13) are not included in the economic feasibility analysis.*

    Commenter: 47.

16. Commenters requested an extension of the 45-day comment period deadline.

    Response: *The close of the written comment period was extended from 4 August 2023 to 18 August 2023.*

    Commenters: 16, 30, 34, 39, 58, 73.

17. Commenter asserts that the proposed MCL violates the Unruh Civil Rights Act. Commenter states that the State Water Board must do more work to understand how this MCL would further systemic injustice by continuing to burden low-income communities of color with unsafe drinking water by conducting a racial equity analysis and include this with the MCL package.

    Response: *Adoption of the proposed MCL does not violate the Unruh Civil Rights Act, which applies to businesses in California. The proposed MCL would apply to all PWS, including those that serve low-income communities of color. Low-income communities of color will therefore benefit from the reduced risk of cancer and liver toxicity that the proposed MCL would provide. To the extent that low-income communities of color are disproportionately affected by drinking water contaminated with hexavalent chromium, the adoption of the proposed MCL offers a significant public health benefit to those communities.*

In State Water Resources Control Board Resolution No. 2021-0050, the State Water Board reaffirmed that all Californians, including people from Black, Indigenous, and other communities of color, deserve safe drinking water. In its Racial Equity Action Plan, the State Water Board incorporated racial equity analysis when developing MCLs using available data, as data and methods allow. As explained in ISOR section 4.1.1, data and methods do not allow for racial equity analysis to be incorporated into MCL development at this time. The State Water Board continues to investigate and develop methods for racial equity analysis that can be incorporated into the development of future MCLs. Please direct any feedback or suggestions on this issue at the State Water Board's next update to its Racial Equity Action Plan.

Commenter: 15.

18. Commenter is concerned because their PWS needs a backup water supply and the proposed MCL could render their wells noncompliant for use unless the well water is "blended or treated for dilution." Another commenter states that their PWS's lack of supplemental water supply poses an economic hardship and fire protection risk to the disadvantaged communities served due to inactivation of wells.

    Response: *PWS that have sources with annual average hexavalent chromium concentrations (calculated pursuant to 22 California Code of Regulations (CCR) 64432(i)) higher than the proposed MCL, including sources of backup water supply, would need to take action to come into compliance. Taking the source offline, treating the water, and blending the water are all options for compliance with the proposed MCL (alternatives to centralized treatment are discussed in ISOR section 11.9). PWS can discuss specific compliance options with the appropriate Division of Drinking Water District Office. The Final EIR section 2.8.6 discusses the possibility for a system to discontinue using a well for drinking water but keep the well on standby for fire protection. Please also see Response E-33 for a discussion of the economic impacts for specific communities. The proposed regulation text was not changed; the existing regulations accommodate the commenter's request.*

    Commenters: 12, 18, 22.

19. Commenters state the current proposal would "deter from the lack of environmental responsibility and punish those PWS struggling to provide affordable water" and would leave many communities exposed to hexavalent chromium and "allow some responsible parties to avoid liability."

    Response: *This regulation does not affect the liability of entities responsible for water contamination. As stated in Water Code 13304, cleanup can be required to restore affected water to background conditions and applies regardless of the promulgation of this proposed MCL. The proposed MCL is meant to be beneficial to public health (HSC 116270) rather than punitive, and an MCL is required to be adopted by statute (HSC 116365 and 116365.5).*

    Commenters: 12, 15.

20. Commenter urges the State Water Board to ensure there is a clear pathway toward total compliance.

    Response: *The State Water Board included requirements for PWS to develop compliance plans in the proposed regulation to "help ensure that the additional time [allotted by the proposed compliance schedule] will be spent efficiently pursuing compliance with the MCL" (ISOR section 5.3). Particularly, compliance plans are expected to help PWS and the State Water Board coordinate and identify issues early so that compliance is possible by the applicable deadline. PWS are responsible for determining their pathway toward compliance with the MCL and work with the appropriate Division of Drinking Water District Office to achieve these ends. The proposed regulation text was not changed.*

    Commenter: 21, 45.

21. Commenter writes that they will be required to treat sources with hexavalent chromium concentrations as low as 8 µg/L under the proposed regulation.

    Response: *Only sources that exceed 10 µg/L (as calculated pursuant to 22 CCR 64432(i)) will be out of compliance with the proposed MCL. While 80% of the proposed MCL was used as a theoretical treatment goal in the cost estimates, PWS will not be required to treat to that level.*

    Commenter: 22.

22. Commenter shares that as a child, she was responsible for translating a notification telling her family not to drink their water because it was contaminated with hexavalent chromium, and her parents could not read the English notification. Commenter also shares that in a community of about 2,200 people, about 6 neighbors have died of cancer, which is higher than the 1-in-2,000 statistic presented by the State Water Board. Commenter points out that she has seen communities with high concentrations of hexavalent chromium in their water also have high rates of cancer, and many in these communities are low-income and are unaware of the presence of hexavalent chromium in their water.

    Response: *The comment is appreciated. Changes were made to the proposed regulation (available for public comment 22 November 2023) to require Tier 2 public notification before compliance deadlines. Tier 2 public notices must contain information in Spanish explaining the importance of the notice and information on how to obtain a translated notice.*

    Commenter: 46.

23. Commenters cite requirements that the Division of Drinking Water (DDW) specify its methodology for comparing regulatory alternatives with an established baseline so that the State Water Board can make decisions for the adoption of the most effective and least burdensome alternative, or the most cost-effective alternative (Gov. Code § 11346.36, subd. (b)(2)). Some commenters assert that a different baseline of 192,770 cancer cases (the total number of cancer cases diagnosed in California in 2023) should be used.

Response: *The procedure used to develop the SRIA and the baseline used were not changed. The baseline used in the SRIA was proper and was reviewed by the California Department of Finance (DOF). In addition, using the total number of cancer cases in California would not constitute a proper baseline because the proposed regulation is only addressing intestinal/stomach cancer caused by hexavalent chromium in drinking water, not other types of cancer or causes of cancer. If the number of intestinal/stomach cancer cases caused by hexavalent chromium in drinking water was known, that data would be used. However, because that data is unavailable, calculations of the changes in cancer cases were used to understand impacts compared to the baseline. Additionally, please see Responses E-12 and E-27 regarding cost-effectiveness and cost-benefit analyses.*

Commenter: 7.

24. Commenter claims that the majority of stated benefits (providing PWS with treatment guidance through BATs, providing consistency in analytical performance, consistent quality of information to PWS customers through notification and health effects language, public awareness, and the ability for small PWS to benefit from improvements in treatment realized by larger PWS through the compliance schedule, etc.) are only benefits to State Water Board staff and not to public health and safety of California residents, as stated in the ISOR. Commenter also claims that public water quality notifications are fearmongering.

    Response: *The stated benefits are benefits to public health and to the safety of California residents: treatment guidance benefits PWS (and anyone else) looking for generally effective treatment methods for hexavalent chromium; consistent quality of information about drinking water benefits the public by ensuring that the data they access is reliable, and benefits PWS by improving information for their customers; and the compliance schedule provides all PWS more time, and allows smaller PWS to learn from larger PWS about implementing compliance projects. The health benefits of the proposed MCL are described in ISOR section 5.2.1.*

    Commenter: 33.

25. Commenter states that establishing a drinking water MCL for hexavalent chromium could help address hexavalent chromium use and prevent contamination in other industries.

    Response: *The State Water Board appreciates the comment. Although adoption of the proposed regulation may affect use of hexavalent chromium or prevent contamination by the chemical, that is not the intent of the State Water Board's actions in adopting drinking water regulations. The proposed MCL is a regulatory limit intended to be used for drinking water.*

    Commenter: 36.

26. Commenter offers to workshop with the State Water Board on measuring water affordability (pending clearing this idea with their Affordability Review Team).

    Response: *The offer for potential collaboration is appreciated.*

Commenter: 73.

27. Commenter suggests that the State should also focus on eliminating hexavalent chromium from other industries that use hexavalent chromium for less important uses, like household items and aesthetic purposes.

    Response: *The State Water Board appreciates your comment. However, comments concerning eliminating hexavalent chromium from other industries are beyond the scope of the proposed regulation. Please also see Response A-25 regarding other industries. The proposed regulation was not changed.*

    Commenter: 36.

28. Commenters request that the regulations be updated to include additional notices that go out to residents served by impacted PWS: this notice should be clear about health risks associated with hexavalent chromium in drinking water and must state that the residents should not drink the water in the interim as solutions are being developed. One commenter also asks that these notices be translated into language(s) spoken by those served by the impacted PWS.

    Response: *22 CCR 64465-D already includes health effects language, and the State Water Board has revised the proposed regulatory language in section 64463.4 to require Tier 2 public notices for MCL exceedances before the applicable compliance deadline. Section 64465(c)(2) already requires public notices to include languages spoken by specific populations within the community.*

    Commenters: 17, 40.

29. Commenter suggests that the “polluter pays” principle should be adopted, where areas with significant and harmful pollution from industry-made hexavalent chromium should be encouraged to take legal action against those polluting industries, and that the State Water Board should assist in these efforts.

    Response: *The State Water Board is aware that some PWS have been able to successfully recover from responsible parties for the cost of treatment. Although adoption of the proposed regulations may provide clarity and assist PWS in their litigation or negotiations with responsible parties over reimbursement for treatment costs, that is not the purpose of the State Water Board’s actions in adopting the regulations. Likewise, any action the State Water Board could take to assist in recouping costs of treatment for PWS is beyond the scope of this regulation. The proposed regulation was not changed.*

    Commenter: 18.

30. Commenter is concerned that treatment technologies are costly compared to blending and requests that in-pipe blending be allowed and to allow for compliance points to be changed to after blending.

    Response: *Blending is already allowed to be a permitted treatment option in circumstances where there is enough time to blend before reaching the first customer. Consistent with existing statutes (HSC 106876 and 116525-116596)*

and regulations (22 CCR 64401.90 and 64413.1), if in-pipe blending is used, additional sampling may be required, including adding a sample tap directly before the first customer. Changing compliance points from source to "every entry point to the distribution system which is representative of each source after treatment" is also allowed, if approved by the State Water Board (22 CCR 64432). PWS are encouraged to discuss compliance points with the appropriate Division of Drinking Water District Office. The proposed regulation text was not changed; the existing statutes and regulations accommodate the request.

Commenter: 12.

31. Commenters state that an aspect of accessibility (as used in the Human Right to Water) that may have been overlooked is the barriers that small PWS experience with alternative strategies for compliance (e.g., point-of-use/point-of-entry (POU/POE), consolidation). These alternatives can take a long time and may require upfront funding for studies and infrastructure improvements. Commenter states that these (and other) issues "can make safe water inaccessible regardless of how much money the State can point to."

    Response: *The State Water Board recognizes that alternative means of compliance, while often less expensive than centralized treatment, may require logistical, technical, or other resources to implement. For example, consolidation with another PWS may obviate the need to install and maintain a treatment facility but demands political will and organizational planning. As described in the ISOR, the State Water Board may provide financial assistance to PWS pursuing alternative means of compliance, such as consolidation. The State Water Board may also provide technical assistance through its Division of Financial Assistance and third-party technical assistance providers. The proposed regulation also includes a phased compliance schedule, with greater time to come into compliance for small PWS. The State Water Board has considered the impact of the proposed regulation on accessibility of safe drinking water and finds that adoption of the proposed regulation would advance that goal—not hinder it.*

    Commenters: 16, 73.

32. Commenters assert that the proposed MCL violates the Human Right to Water because it does not satisfy the following requirements: (1) agencies must give preference and adopt policies that advance the human right to water when considering a range of policies or regulations; (2) agencies must refrain from adopting policies or regulations that run contrary to securing universal access to safe drinking water (cannot disregard the impacts of decisions on the safety, affordability, or accessibility of water); (3) agencies must note in the record the impact of the agency's actions on access to safe and affordable water (which requires, at a minimum, explicit reference to Assembly Bill 685 and an explanation of a decision's potential impact on the quality, affordability, and accessibility of drinking water).

    Response: *Water Code 106.3—often referred to as the "Human Right to Water Law"—does not contain these requirements. Rather, it declares that it is the established policy of the state that every human being has the right to safe,*

clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. It further directs state agencies, including the State Water Board, to consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the uses of water described in Water Code 106.3. The State Water Board considered the policy in Water Code 106.3 when it adopted the proposed regulation in Resolution No. 2004-0015. Please also see Response A-11 regarding how the proposed regulation supports the human right to water.

Commenter: 15.

33. Commenters state that DDW's claims regarding the availability and viability of alternatives to centralized treatment are unsupported (including POU/POE devices, switching to surface water, purchasing water from another PWS, and consolidation, and separating potable and non-potable water), and/or the alternatives discussed do not work for their PWS. Commenters point out that DDW does not provide any analysis of the feasibility of these alternatives. One commenter would like an acknowledgement that consolidations as a mechanism for small systems to achieve compliance with a new MCL will not benefit the receiving water system. One commenter notes that POU treatment appears to be the most economical, and that the most common POU treatment is reverse osmosis, which requires a significant waste of water and cannot be accommodated in adjudicated basins.

    Response: *While not all alternatives to centralized treatment may work for all PWS, these alternatives have been implemented across the state, demonstrating feasibility (ISOR section 11.9). A variety of POU devices capable of treating hexavalent chromium are registered for residential use in California (listings of registered devices can be found at the State Water Board's website at https://www.waterboards.ca.gov/drinking_water/certlic/device/watertreatmentdevices.html), including those that do not require water waste. Additional consideration of alternatives was made available for public comment on 31 January 2024 with the addition of a Consolidation and Alternatives Analysis to the Documents Relied Upon in the rulemaking record. Further analysis of other alternatives was not completed due to uncertainties and a lack of data.*

    Commenters: 2, 4, 20, 23, 34, 52.

34. Commenter recommends further evaluation to determine if further consideration of alternatives is needed, especially in light of equity concerns.

    Response: *Alternatives have been considered in ISOR section 11.9 and further considered in the Consolidation and Alternatives Analysis, which was added to the Documents Relied Upon and released for public comment on 31 January 2024. In addition, because HSC 116365(b)(3) requires that economic feasibility be determined using BAT rather than alternatives to treatment, further consideration of alternatives would not change the outcome of the economic feasibility analysis.*

Commenter: 4.

35. Some commenters critiqued the affordability metrics/benchmarks used, and some commenters requested an affordability impact analysis, the use of alternative measures/metrics to determine affordability, an affordability justification for the proposed MCL, a "sharpening" of the affordability impact analysis to more accurately characterize the experience of households that will be more acutely affected by the proposed MCL, and/or clarification regarding the difference between economic feasibility and affordability.

    Response: *Because of the multitude and variety of PWS in California, it is inevitable that the costs of complying with an MCL will vary, and that some systems will struggle due to a lack of financial capacity. Therefore, the State Water Board evaluated a variety of potential metrics for affordability and funding assistance needs for illustrative purposes. Nevertheless, the State Water Board must adopt a standard for hexavalent chromium that is as close as possible to the PHG as is technologically and economically feasible and has no discretion to set a different "affordable" MCL that is less protective of public health. Therefore, no change was made to the proposed regulation or analysis. The proposed regulation does not preclude PWS from using an alternative means of compliance that may be more affordable (discussed in ISOR section 11.9). Please see ISOR sections 11.1 and 11.3 for additional discussion on affordability. However, the State Water Board is not charged with defining affordability or determining whether the proposed regulation is affordable. Rather, the Board must determine that the proposed MCL is economically feasible, which it has done in the resolution adopting the proposed regulation and analyzed in detail in ISOR section 11.*

    Commenters: 2, 4, 8, 9, 16.

36. Commenter acknowledges that the decision to regulate hexavalent chromium and the level to which it is regulated is not easy, especially with "extremes on both sides of the measure."

    Response: *The State Water Board appreciates the acknowledgement from the commenter.*

    Commenter: 12.

37. Commenter points out that hexavalent chromium is manufactured by Elementis plc (Yildirim Group) in California and that the chemical has long been used and discarded by industry, including being discharged into drinking water directly and indirectly for decades. Commenter states that in places like the Coachella Valley, this can be seen by overlaying groundwater recharge maps with hexavalent chromium groundwater pollution maps.

    Response: *The comment is appreciated.*

    Commenter: 37.

38. Commenters support continuing to refine all cost data and a more robust model for evaluating economic feasibility.

Response: *While the support is appreciated, refinements to cost and economic modeling for future rulemakings are outside the scope of the proposed rulemaking.*

Commenter: 21, 45.

B. Best Available Technology (BAT)

1. Commenters request that the useability of the technologies designated as BAT be re-examined, especially for small PWS. Some commenters state that a significant limitation of reduction-coagulation-filtration (RCF) is the need for direct access to a sanitary sewer system that can handle the treatment residuals generated.

   Response: Reduction-coagulation-filtration (*RCF) has been confirmed as BAT and as effective and widely applicable by an external scientific peer review, has proven successful for treating hexavalent chromium in small PWS, and is commercially available for flows down to 1 gallon per minute (gpm) (ISOR section 4.3.2). As confirmed by the external scientific peer review, RCF and ion exchange treatment have proven successful for small PWS, and treatment systems are commercially sold for hexavalent chromium for small PWS. Reverse osmosis implemented as centralized treatment may not always be feasible, especially for small PWS (as discussed in ISOR section 4.3.3). However, reverse osmosis treatment has been successfully implemented for small PWS in the form of POU/POE systems (ISOR sections 4.3.3 and 11.9.1). Further, RCF does not require direct sewer access. The Cost Estimating Methodology (CEM) (ISOR Attachment 2 (SRIA) section I.3.a.2.C) used RCF cost estimates that were based on the assumption of no direct sewer access (as clarified in the Final Statement of Reasons (FSOR) section 2): the cost estimates from Najm et al. (2014) included a clarifier and backwash water system to return clarified waste to the head of the plant and hazardous waste disposal for dewatered sludge; the cost estimates from Aqua Metrology Systems (2022) included a backwash system and sludge disposal. The proposed regulation's designation of RCF as BAT was not changed. Cost estimates included an additional operator to run the treatment facilities (ISOR Attachment 2 section I.3.a.2).*

   Commenters: 2, 4, 21, 26.

2. Commenters request clarification of the treatment methods that will be accepted to reach compliance and encourage the State Water Board to embed flexible methods that allow PWS to choose which technologies or combination of treatment work best for their agencies, both financially and physically. Commenters urge timely consideration and approval, where appropriate, by the State Water Board of PWS's preferred treatment methods.

   Response: *Any treatment technology, including BAT, may be used but must be permitted by the State Water Board's Division of Drinking Water, as required by existing regulation. The Division approves changes to treatment in accordance with its existing general permitting authority (HSC 116540), which allows for*

consideration of system-specific factors in determining whether to approve a proposed treatment method. The proposed regulation text was not changed.

Commenters: 15, 30.

3. Commenter points out that the State Water Board has not addressed the significant differences between RCF reagents and their overall feasibility, safety, and effectiveness. As such, the commenter provided relevant information regarding the differences between stannous chloride, ferrous sulfate, ferrous chloride, and electrolytic stannous. In summary: stannous-based reagents have more favorable chemistry for reducing hexavalent chromium compared to ferrous-based reagents; bulk stannous chloride is highly toxic and corrosive and can pose serious health risks; and electrolytic stannous is safe, inexpensive, and can be generated on demand.

   Response: *The variety of RCF reagents available is one of the reasons RCF treatment is broadly applicable for the treatment of hexavalent chromium. RCF reagents are not specified in the proposed regulation, and reagent selection should be made on a case-by-case basis based on water chemistry and other factors noted by the commenter. The proposed regulation's designation of RCF as BAT was not changed.*

   Commenter: 3.

4. Commenters request further consideration of stannous chloride as BAT, which has proven to be reliable and effective under specific conditions and may offer a more cost-effective method for compliance with the proposed regulation. Some commenters request that stannous chloride be quickly evaluated and approved by DDW, where appropriate. One commenter points out that studies show that stannous chloride combined with filtration can be used to remove hexavalent chromium.

   Response*: As described in HSC 116370, BAT is a designation given to treatment that has been proven effective under full-scale field applications, which does not apply to the direct application of stannous chloride into drinking water without filtration (explained in ISOR section 4.3.4). However, the use of stannous chloride with filtration is a form of RCF, which is already proposed as BAT. For those who wish to apply stannous chloride without filtration, additional evaluation of distribution water quality may be required. So far, stannous chloride application without filtration has not been proven effective, and the State Water Board is unaware of any recent evidence that shows otherwise. The concerns regarding applying stannous chloride without filtration are an accumulation of chromium and tin (stannous) in the distribution system, as well as clogging issues for consumers. Furthermore, BAT designation does not impact treatment costs. The proposed regulation was not changed.*

   Commenters: 13, 21, 24, 34, 43, 45, 51, 59.

5. Commenters note that DDW has issued scores of operating permits deploying all three proposed BATs in both small and large PWS, demonstrating that these technologies are feasible (for example, iron and manganese RCF treatment, arsenic

RCF treatment, and treatment to remove nitrate, perchlorate, PFAS, and 1,2,3-TCP). Some commenters state that some of these treatment plants have already been incidentally removing hexavalent chromium, sometimes to non-detectable levels.

Response: *The State Water Board agrees that the technologies designated as BAT are feasible.*

Commenter: 37.

6. Commenter asserts that the State Water Board failed to properly consider alternatives to centralized treatment (e.g., consolidation, alternative water supplies, blending, and the application of stannous chloride without filtration) as BAT.

   Response: *The State Water Board recognizes that there may be other alternative options to comply with the MCL, but alternatives that are not forms of treatment cannot be considered BAT, and therefore cannot be used for analysis of economic feasibility (HSC 116365(b)(3) requires economic feasibility to be based on the costs of BAT). Because consolidation, obtaining alternative water supplies, and blending are not forms of treatment, they cannot be considered for BAT. However, the designation of BAT does not preclude a given PWS from receiving a domestic water supply permit that allows the use of alternative treatment technologies or strategies that may, for that PWS, be capable of sufficiently complying with the hexavalent chromium MCL. PWS may propose alternative treatment options when applying for a permit and, if the proposal meets statutory and regulatory requirements (HSC 116525-116595), may be granted a permit to operate the alternative treatment by the appropriate Division of Drinking Water District Office. Please see Response B-4 for a specific response to the consideration of stannous chloride without filtration as BAT. While the regulation text was not changed to include alternative compliance methods as BAT, please see the Consolidation and Alternatives Analysis document added to the Material and Documents Relied Upon in the rulemaking file.*

   Commenters: 4, 15.

7. Commenters would like the option to use new technologies, possibly in the form of effective water purification systems at each household. Commenters ask if financing would be available and if new homes could have this type of system installed.

   Response: *Residential water treatment devices (POU/POE) can be used at each household instead of centralized treatment under certain circumstances (HSC 116380). However, such devices may not be a solution available for new housing developments, where PWS must prove they can meet long-term water demands before they can be permitted (HSC 116552). While financial assistance is beyond the scope of this regulation, it is currently available for PWS (information on funding opportunities is available on the State Water Board's website at https://www.waterboards.ca.gov/water_issues/programs/grants_loans/). The proposed regulation text was not changed; the existing statutes and regulations accommodate the request.*

Commenter: 17.

8. Commenter appreciates the State Water Board's recognition that centralized treatment is not always or even usually the best response for small PWS serving disadvantaged communities. In many cases, the solution for small PWS is consolidation.

   Response: *The comment is appreciated.*

   Commenter: 40.

9. Commenter suggests that water contaminated with hexavalent chromium could be diluted with less contaminated water, such that the amounts of hexavalent chromium throughout the state could be evened out.

   Response: *While this solution is often used for water in close proximity (referred to as blending), it is often very difficult and expensive to transport water over large distances, which is why this solution is not often implemented in such a way. The proposed regulation text was not changed.*

   Commenter: 36.

10. Commenter suggests that reverse osmosis could be used at every plant to remove all contaminants, but then qualifies that it would be too expensive to implement across the state.

    Response: *ISOR section 4.3.3 noted that reverse osmosis is often limited by high costs.*

    Commenter: 36.

11. Commenter states that in order to comply with the MCL, their utility would have no choice but to implement either strong base anion exchange or RCF as approved, designated as BAT.

    Response: *As stated in ISOR section 5.4, PWS are not required to use BAT. The proposed regulation does not prescribe the manner of compliance.*

    Commenter: 22.

12. Commenter states that the long-term fate of stannous chloride treatment by-products (chromium oxide, stannic oxide, and adsorbed materials, including hexavalent chromium) will not be known or predictable in water distribution systems, domestic plumbing systems, or refrigerator filters if these are not removed by filtration at the point of treatment. Commenter explains how much stannous would be required for treatment in a typical system, the amount of sludge that would be produced (to presumably be deposited into a distribution system), and the likelihood and pathways for reconversion of trivalent chromium back into hexavalent chromium. Commenter asserts that applying stannous treatment without filtration would be unpredictable and create uncontrolled health risks for consumers, comparing these risks to those experienced by households with lead plumbing and lead service lines. In addition, commenter notes that piping system maintenance may cause a significant spike of stannous and total chromium in a distribution system, and the only way to mitigate this risk would be to implement a frequent and comprehensive

water quality monitoring program across each system's distribution network, which would likely be cost-prohibitive and ineffective given the time it takes to receive monitoring results.

Response: *The information illustrating factors that would need to be addressed to apply stannous chloride without filtration to ensure public health protection is appreciated. Please also see Response B-4 for a specific response to the consideration of stannous chloride without filtration as BAT.*

Commenter: 3.

13. Commenter claims that proposed BAT (such as ion exchange or RCF) can be highly water intensive and will require PWS to have a method of disposal and concentrate contaminants in a different geographical location. Additionally, the commenter claims these factors and the inherent danger of storing more chemicals will lead to additional discharge and permitting requirements. Utilizing more chemicals, more water, and more staff time to only slightly improve water quality does not coincide with the State's passion to make "conservation a way of life."

    Response: *The environmental impacts of compliance with the proposed regulations have been analyzed in the EIR prepared in connection with this rulemaking. Impacts regarding hazardous materials and effects on hydrology are discussed in EIR chapters 12 and 13, respectively. Storing chemicals may require permitting and proper discharge, as mandated by applicable statutes or regulations.*

    Commenter: 12.

C. Compliance Schedule

1. Commenters appreciate the existence of a compliance schedule.

    Response: *The comment is appreciated.*

    Commenters: 4, 34, 73.

2. Commenters would like the compliance timeline extended to give PWS more time. Commenters state that the current timeline is infeasible for some or most PWS because of the time needed to comply with the California Environmental Quality Act (CEQA), comply with California Coastal Act, applying for and contracting with DFA, Proposition 218 compliance, engineering design, procurement and construction challenges, installation, permitting, and/or any potential challenges (administrative, financial, and operational) introduced by alternatives to centralized treatment (e.g., consolidation, POU/POE). One commenter states that to comply with the MCL and the compliance schedule as proposed, many PWS will need to inactivate wells and many do not have supplemental supply. Some commenters say that lengthening the proposed compliance schedule can assist PWS, most importantly the smallest of them, to spread out costs, and that additional time is invaluable to PWS that have little access to additional capital (such as when serving a disadvantaged community). Some commenters suggest that the proposed timeline should be a base period from which additional time is granted. Some commenters specifically

request that the compliance timeline be extended to five years (some commenters specify to match the Federal Safe Drinking Water Act and/or Senate Bill 385 of 2014), between four and six years, and/or that extra time be given to PWS that can show they are working in good faith to comply with the proposed MCL. One commenter states that the impact of project reviews on State Water Board resources should be considered.

Response: *As noted in ISOR section 5.3, at the discussion of proposed subsection (q)(1) (p.27), lengthy grace periods and/or compliance schedules—such as those proposed here—have the potential to result in delays in compliance efforts, including those for which compliance could be most quickly obtained and are, therefore, not in the best interest of public health. The Legislature required that an MCL be adopted for hexavalent chromium, and this fulfillment of requirement is more than twenty years overdue. As further described in ISOR section 5.3 (pp.26-27), the proposed extended compliance schedule is intended to stagger demand for material and services in a sequence with the potential benefit of reducing costs to PWS with the smallest ratepayer bases. Consequently, the State Water Board has not extended the compliance dates. The development of the proposed MCL has been public for years: the State Water Board was ordered to adopt a new MCL for hexavalent chromium in 2017, and public meetings on this topic have been held since early 2020. By the time PWS that fall within the first compliance deadline (PWS with 10,000 or greater service connections) are expected to comply with the MCL (two years after the effective date of the regulation), they will have had ample time to prepare: nine years since the MCL was ordered by the court to be re-established, six years since public meetings related to the development of the proposed MCL began, and four years since the draft proposed MCL of 10 ug/L was released. In addition, because compliance with the proposed MCL is based on a running annual average of quarterly results, a PWS may not be in violation for as long as an additional year after their compliance deadline. As discussed in the Final EIR section 2.8.6, the State Water Board* considers a water system's existing source capacity when deciding whether to require a water system to discontinue a particular source. *Furthermore, the State Water Board has enforcement discretion and need not issue an enforcement citation for a PWS working diligently toward compliance. In response to commenter concerns, the proposed regulation was changed to remove a compliance plan requirement that a PWS describe how it would comply by the applicable compliance deadline. The impacts of project reviews on State Water Board resources have been specifically considered in ISOR Attachment 2 (SRIA) section D.2.a.*

Commenters: 4, 5, 10, 11, 12, 13, 16, 18, 22, 26, 27, 30, 34, 39, 43, 51, 73.

3. Commenter supports the compliance schedule in its current form.

   Response: *The support is appreciated.*

   Commenter: 21.

4. Commenter requests implementation of a staggered MCL update over multiple phases: initially, implement an MCL that is feasibly plausible (such as 20 µg/L) and

then gradually lower the MCL to the designated concentration (10 µg/L). Commenter states this would reduce the initial demand for BAT treatment technology, allow PWS with "close" concentrations more time to plan and develop funding to comply, and reduce the impact on the State Water Board resources for project review.

Response: *The State Water Board appreciates the suggestion and may consider alternative approaches to staggering MCLs or other drinking water standards in future rulemakings. At present, the State Water Board has decided to continue promulgating its size-based schedule for the reasons discussed in ISOR section 5.3. However, the assertion that the commenter's suggestion would reduce the impact on State Water Board resources for project review is not accurate; implementing the commenter's suggestion would merely redistribute the demand for those resources.*

Commenter: 5.

5. Commenter appreciates inclusion of the compliance plan requirement.

   Response: *The support is appreciated.*

   Commenter: 40.

6. Commenter claims that the proposed compliance schedule exacerbates existing injustices where those living in disadvantaged communities are exposed to a dangerous carcinogen longer than more privileged areas. Consequently, commenter asks the State Water Board to ensure the least amount of delay possible by making it clear that compliance plans must be developed during the time provided by the compliance schedule and that enforcement actions will be prioritized for PWS that have not made progress during the time provided by the compliance schedule.

   Response: *Per the proposed regulation text, PWS that exceed the MCL before the applicable compliance deadline will be required to submit compliance plans within 90 days of exceedance, and the dates within those plans are enforceable. Enforcement actions will be considered if PWS violate their compliance plan or compliance deadline and issued if appropriate. No changes were made to the proposed regulation text.*

   Commenter: 15.

7. Commenters question whether a four-year compliance schedule for very small PWS is justified. They are unaware of any reason it should take longer for PWS with less than 1,000 connections compared to PWS with less than 10,000 connections. This is particularly concerning because very small PWS with fewer than 1,000 connections disproportionately serve communities of color. Commenters suggest this category should be shortened/combined with the three-year compliance group.

   Response: *As explained in ISOR section 5.3 (p.27), an extended compliance schedule is necessary to stagger demand for material and services related to design and construction of treatment facilities, especially in consideration of continued supply chain disruptions, with the compliance schedule sequence based on (1) larger PWS being more typically able to mobilize and implement treatment more quickly than smaller PWS and (2) the anticipated benefit of*

reduced costs to smaller PWS as a result of technology refinements and savings discovered earlier by larger PWS. No change was made to the proposed regulation because the smallest PWS may need the additional year to realize the benefits of developments by larger PWS and because a shorter, more compacted compliance schedule would increase the potential for supply chain delay impacts.

Commenters: 15, 40.

8. Commenters request that the regulation be amended to clarify that the compliance schedule is the maximum time provided, not the default, and that PWS are required to comply sooner where possible.

   Response: *No changes were made to the proposed regulation text. Terms such as "where possible" or "as short as practicable" tend to be subjective, unenforceable, noncompliant with the clarity standard of the APA, and have, therefore, not been added to the proposed regulation text. The proposed Tier 2 consumer notification requirements are expected to encourage prompt compliance. The compliance schedule established in Table 64432-B applies to all PWS.*

   Commenters: 15, 40.

9. Commenter notes that it may not be possible for all PWS (especially small PWS that do not have in-house staff) to complete and submit a compliance plan within 90 days of an exceedance.

   Response: *No changes were made to the proposed regulation text. Ninety days after an exceedance (which can take up to a year to determine) is enough time to develop and submit a compliance plan such as that specified in proposed 22 CCR 64432(q)(1). Preparation of a compliance plan can begin as soon as a PWS knows it is likely to exceed the MCL.*

   Commenter: 5.

D. Public Health Goal (PHG) and Health Benefits/Impacts

1. Commenter asserts that the PHG of 0.02 µg/L was properly established by OEHHA, which is an internationally celebrated, scientifically-grounded agency that provides robust analysis. Commenter points out that as part of the formal adoption of the 2011 PHG, OEHHA also provided comprehensive responses to major comments that underscored its reasoning and scientific analysis. Commenter notes that to date, OEHHA has not found any compelling evidence that would require a change to the current PHG. Commenter does not expect the current hexavalent chromium review process to change the PHG.

   Response: *The comment is appreciated.*

   Commenter: 15.

2. Commenter would like the State Water Board to consider the public health benefits associated with the many MCLs already issued or anticipated to be issued, and

states that considering the cumulative public health benefits provided by all existing and reasonably foreseeable MCLs is clearly within the authority of the State Water Board to consider.

Response: *This request is beyond the scope of the proposed rulemaking, which does not require consideration of the benefits of other MCLs. Moreover, calculating the benefits of MCLs that the State Water Board may consider in the future would not be practical at this time because of a lack of information.*

Commenter: 7.

3. Commenter claims that the rulemaking documents make unsupported and unquantifiable claims about additional health benefits from "improving public perception of the water supply" which may then result in "decreased consumption of bottled water" and "may help efforts to reduce childhood consumption of unhealthy substitutes (i.e., sweetened beverages) to drinking water, therefore providing a positive health benefit." Commenter requests that these claims be removed from the rulemaking record, and suggests that the proposed MCL may have the opposite effect: exponentially increasing the cost of drinking water in some areas, making unhealthy substitutes a more affordable choice and decreasing public confidence in California's drinking water regulations.

   Response: *The claim was not removed from the rulemaking record. Public perception about tap water quality can impact public consumption of tap water. As such, there can be a desire for alternatives to drinking water, many of which can be less healthy and more expensive. The ISOR merely notes the possibility that an improved perception may reduce the desire to purchase those alternatives.*

   Commenter: 2.

4. Commenters request that the rulemaking be suspended until OEHHA publishes the updated hexavalent chromium PHG, which is currently being reviewed. Some commenters state that moving forward to set an MCL is improperly biasing the PHG update process, presuming the outcome of the review, or will undermine the objectivity, scientific integrity, and/or credibility of the MCL development process. Commenters assert that the 2011 hexavalent chromium PHG should not be used as the basis of the proposed MCL, stating that the current PHG is unsupportable, outdated, indefensible, unreliable, arbitrary, and/or capricious. Some commenters provided health information or other research to support their statements, including guidance for updating the PHG. One commenter states that OEHHA's decision to update the PHG appears to be the catalyst for issuance of the proposed regulation.

   Response: *Comments regarding the methodology, assumptions, and research relied on in OEHHA's development of PHGs are outside the scope of this rulemaking. OEHHA is an independent entity, and their PHG establishment and revision processes are independent from this proposed rulemaking. The State Water Board considers the PHG values OEHHA establishes but does not weigh in on their formation. Information on how to participate in the public comment opportunities afforded in OEHHA's hexavalent chromium PHG review process*

can be found on OEHHA's website at https://oehha.ca.gov/water/public-health-goal/hexavalent-chromium-drinking-water. In response to one commenter suggesting OEHHA's PHG update was the catalyst for the proposed regulation: work for major regulations such as the proposed regulation begins years before the formal rulemaking process begins (see Notice of Proposed Rulemaking, p.9, and ISOR Attachment 2 (SRIA) section A.3 for details on pre-regulation public meetings), and work on the proposed regulation began several years before OEHHA's decision to update the PHG.

HSC 116365 requires that OEHHA and the State Water Board review their PHGs and MCLs every five years; both PHG and MCL reviews are multi-year processes. Within the timeframe of either a rulemaking or a potential regulatory compliance schedule, any PHG would reach its 5-year anniversary and could prompt new calls to wait for the next PHG review. In determining whether to wait for OEHHA to complete its review of the PHG, the State Water Board must balance the protection of public health that would be afforded by establishing an MCL now at the level determined to be technologically and economically feasible with the potential uncertainty of where OEHHA may set a revised PHG.

When a PHG review is in progress, and it appears likely that the PHG will change as a result, the State Water Board can suspend a rulemaking to wait for an updated PHG. However, for hexavalent chromium, the Board is under a statutory duty to adopt a drinking water standard by a deadline that is past due (HSC 116365.5), and there are reasons to believe that the PHG will not change, or that it will not change to a higher number than the proposed MCL. First, the 2016 review did not result in a change to the PHG, indicating that the evidence available at the time did not warrant a change to the PHG. Second, OEHHA has announced a draft noncancer health-protective concentration (HPC) (one of two precursors to the PHG) of 5 µg/L, which is below the proposed MCL. Because OEHHA sets the PHG at the lower of the cancer or noncancer HPCs, the draft noncancer HPC of 5 µg/L will, if not revised upward, set the ceiling for any updated PHG for hexavalent chromium. For these reasons, the State Water Board is not suspending the current hexavalent chromium rulemaking process. If OEHHA revises the hexavalent chromium PHG to a value higher than 10 µg/L, the proposed MCL may be revised to that level. However, since the proposed MCL has been determined to be the lowest level technologically and economically feasible, any revision of the PHG to values at or below 10 µg/L would not change the level of the proposed MCL.

Commenters: 1, 2, 7, 16, 18, 33, 41, 44, 47, 63, 73.

5. Commenter questions how much health impact is expected between 20 µg/L and 10 µg/L, and asks whether that is worth a $100 million investment, especially during times of economic uncertainty and extreme instability in housing.

   Response: *The cancer risk for drinking water with 10 µg/L of hexavalent chromium is 1 in 2,000, and the risk for water with 20 µg/L of hexavalent chromium is 1 in 1,000. The health impact of an alternative MCL of 20 µg/L would be about 3 cancer cases avoided per year, while the proposed MCL of*

10 µg/L would reduce about 13 cases per year (ISOR Attachment 1, Table 26). Because the State Water Board did not perform a cost-benefit analysis as to what the health benefits were worth monetarily, there is no such analysis or information to disclose. The analysis of benefits was considered generally, consistent with Government Code 11346.5, and included protection of public health. Information on the compliance cost and health benefit analysis is provided in the ISOR.

Commenter: 59.

6. Commenter requests that any and all document and communications related to, referring to, or concerning the following be submitted as part of the administrative record for the hexavalent chromium MCL rulemaking: (1) OEHHA's publication of the hexavalent chromium PHG in 2011; (2) OEHHA's decision to update the hexavalent chromium PHG in 2016; (3) OEHHA's 6 July 2022 memorandum to DDW regarding OEHHA's decision not to update the hexavalent chromium PHG; (4) OEHHA's 27 March 2023 announcement of a second data call-in for the hexavalent chromium PHG update; (5) and any and all correspondence, documents, and information submitted by anyone to OEHHA in response to, relating to, or concerning the aforementioned documents.

   Response: *(1) OEHHA's 2011 PHG is included in the Documents Relied Upon section of the rulemaking record. (2) OEHHA's 2016 letter (available on OEHHA's website at https://oehha.ca.gov/media/downloads/water/public-health-goal/10282016phgprocessupdate.pdf) states merely an intent to review the PHG for hexavalent chromium, which results in a PHG update only when there is enough evidence to warrant a recalculation of the PHG; as this document was not used as a basis for this rulemaking, it is not included in the rulemaking record. (3) OEHHA's 2022* memorandum (available on OEHHA's website at *https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/chromium6/crvi-memo.pdf), which points to an updated PHG that "would not likely vary significantly from the 2011 value," was also not used as a basis for this rulemaking and so is not included in the rulemaking record. Likewise, items (4) and (5) were not used as a basis for this rulemaking and so are not included in the rulemaking record. OEHHA documents related to hexavalent chromium can be found on OEHHA's hexavalent chromium webpage at https://oehha.ca.gov/water/public-health-goal/hexavalent-chromium-drinking-water. Any other OEHHA documents (including correspondence, documents, and information submitted by anyone to OEHHA in response to, related to, or concerning OEHHA's 2016 decision to update the PHG, the 2022 letter, or the second data call-in) should be requested directly from OEHHA (the State Water Board does not have this information).*

   Commenter: 2.

7. Commenter states that using the OEHHA's July Memorandum (available on OEHHA's website at *https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/chromium6/crvi-memo.pdf)* as the basis for moving forward with the hexavalent

chromium MCL rulemaking is arbitrary and capricious since the PHG is required to be updated pursuant to a statutorily prescribed process that the memorandum did not comply with.

Response: *The State Water Board did not rely on OEHHA's 2022 memo, nor is it listed in the Documents Relied Upon for the preparation of the ISOR (see ISOR section 13 for the Documents Relied Upon, consistent with Government Code 11346.2(b)(3)). However, as identified in the 31 January 2024 Notice of Public Availability of Additional Documents Relied Upon, the "Proposed Health-Protective Concentration for Noncancer Effects of Hexavalent Chromium in Drinking Water" was relied upon as supporting information for promulgating the proposed regulation while OEHHA undertakes its review of the PHG. In that document, OEHHA has announced a draft noncancer HPC (one of two precursors to the PHG) of 5 µg/L, which is lower than the proposed MCL of 10 µg/L. Although the State Water Board recognizes that the health-protective number for noncancer effects is still in draft form and that there is additional peer review and public comment before it is finalized, it provides no indication that an updated PHG would be revised to a concentration higher than the proposed MCL.*

Commenter: 2.

8. Commenters say that HSC 116365(e)(2) requires that a PHG for a newly regulated contaminant (such as hexavalent chromium) be published "at the same time" that an MCL is proposed. Therefore, commenters assert that this section requires a newly developed and published PHG before an MCL can be proposed and request that the rulemaking be suspended until OEHHA has completed its review of the PHG.

   Response: *The State Water Board will proceed with the rulemaking process. The State Water Board agrees that, consistent with the statutory language, a PHG must be in place before the State Water Board can set an MCL "as close as feasible to the corresponding public health goal." For the reasons discussed below, however, the State Water Board does not agree with the commenter's assertion that it must wait until OEHHA completes its current review of the PHG. A PHG was set by OEHHA in 2011, therefore, in compliance with the statute, the State Water Board may adopt an MCL. HSC 116365 requires that a PHG is in place when the State Water Board proposes to adopt an MCL for a newly regulated contaminant. This is consistent with the Legislature's amendment to the statute in 1999, when it deleted the term "concurrently" from subsection (e)(2) of HSC 116365 (Stats. 1999, ch. 777, sec. 1). Current language "at the same time" is interpreted to mean that a PHG must be in place when the State Water Board proposes to adopt an MCL for a newly regulated contaminant. The legislative history of section 116365 shows that the State Water Board is not prohibited from adopting a primary drinking water standard after a PHG is published. Before the Legislature approved the Calderon-Sher Safe Drinking Water Act of 1996 (Stats. 1996, ch. 755), subsection (a) of HSC116365 required that primary drinking water standards be adopted "concurrent with" the adoption of PHGs established by OEHHA (referred to, at the time, as "recommended public health goals.") The Calderon-Sher Safe*

Drinking Water Act of 1996 deleted this requirement by repealing section 116365 and re-enacting it with different language (Stats. 1996, ch. 755, sec. 8-9). In re-enacting subsection (a) of HSC 116365, the Legislature did not impose a timing requirement on the adoption of primary drinking water standards vis-à-vis PHGs. Rather, in subsection (e)(2) of HSC 116365, the Legislature required OEHHA to adopt a PHG "concurrently…with the adoption of a primary drinking water standard by the department for any newly regulated contaminant." Thus, to the extent that there was any directory duty of the State Water Board to adopt primary drinking water standards concurrently with PHGs, that duty was repealed by the Legislature in 1996. In addition, the Legislature subsequently amended subsection (e) of HSC 116365 in 1999 to clarify the timing of new PHGs (Stats. 1999, ch. 777, sec. 1). Among other things, the Legislature clarified that OEHHA must publish PHGs when the department "proposes" new primary drinking water standards, rather than when the department adopts primary drinking water standards. Thus, the timing requirement in subsection (e)(2) of HSC 116365 does not even pertain to—let alone prohibit—the State Water Board's adoption of a primary drinking water standard. The subsection relates to OEHHA's requirement to publish a PHG before the State Water Board adopts a primary drinking water standard. In the case of the primary drinking water standard for hexavalent chromium, OEHHA published a PHG for hexavalent chromium before the State Water Board adopted the primary drinking water standard, in accordance with subsection (e) of HSC 116365.

Commenters: 2, 13.

9. Commenters request that any up-to-date science be provided that confirms that setting the hexavalent chromium MCL at 10 µg/L will ensure a significant improvement in public health. Commenters state various health-related claims for hexavalent chromium. Some commenters say that there is no evidence that the proposed MCL would result in any health benefit, that there is no health benefit for MCLs set below 50 µg/L, that 100 µg/L is considered safe by the federal government, that hexavalent chromium is no more dangerous than caffeine, and/or that it is unclear whether any public health benefits will result from the proposed regulation. One commenter asserts that documented toxicity cases only involved direct occupational hazards and that in a country where the risk of developing cancer is 1 in 2 or 1 in 3, the protective effect of reducing the risk of one chemical would be moot. In addition, commenters assert that chromium is a trace element needed by the human body for insulin uptake, that hexavalent chromium turns into trivalent chromium in the body, and/or that the American Chemistry Council said in a press release that there is no basis for the proposed hexavalent chromium reductions. Many of these commenters oppose the regulation. However, one commenter states that it is a lie that hexavalent chromium breaks down in stomach acid and converts to trivalent chromium.

   Response: *The process of establishing a PHG is the jurisdiction of OEHHA, and the State Water Board is required to utilize the PHG when establishing an MCL. OEHHA documents related to hexavalent chromium can be found on OEHHA's*

hexavalent chromium webpage at https://oehha.ca.gov/water/public-health-goal/hexavalent-chromium-drinking-water. The State Water Board is mandated, via HSC 116365 and 116365.5, to adopt an MCL for hexavalent chromium that is as close to the PHG as technologically and economically feasible. As such, the State Water Board is proceeding with the regulation. Because the PHG is set at the point where the contaminant in drinking water is not anticipated to cause or contribute to adverse health effects or that does not pose any significant risk to health, any MCL closer to that level would have a health benefit. Commenters may find descriptions of the health benefits of the proposed MCL in ISOR section 5.2.1 helpful.

Commenters: 12, 25, 29, 33, 35, 37, 44.

10. Commenters state that OEHHA conceded that the 2011 hexavalent chromium PHG is based on outdated science and/or that the PHG no longer meets necessary requirements. In addition, some commenters state that OEHHA announced that "significant science" had developed "since OEHHA last reviewed the Cr(VI) PHG in 2011."

    Response: *The 2011 PHG is being relied upon for the reasons detailed in Response D-4. The State Water Board is unaware of a statement(s) by OEHHA to the effect that the 2011 PHG is based on outdated science, the 2011 PHG no longer meets necessary requirements, or that "significant science" has developed since the 2011 PHG was published. However, OEHHA is an independent entity, and their PHG establishment and revision processes are independent from this proposed rulemaking. Any comments regarding OEHHA or their establishment of the PHG are beyond the scope of the proposed regulatory action and should be addressed to OEHHA.*

    Commenters: 2, 7.

11. Commenter points to 27 CCR 25707(a), which they say requires the State Water Board to assess the danger of the substance (in this case, hexavalent chromium) and if, "where scientifically valid absorption studies conducted according to generally accepted standards demonstrate that absorption of a chemical through a specific route of exposure can be reasonably anticipated to present no significant risk of cancer at levels of exposure not in excess of current regulatory standards…," then the chemical may be identified as presenting no significant risk by that route of exposure. Therefore, commenter asserts that the State Water Board must review all pertinent studies, identify the "significant risk of cancer at levels of exposure not in excess of current regulatory standards," and quantify and provide the number of cancer cases that will be avoided if a new and lower MCL were to be adopted.

    Response: *22 CCR 25707(a) contains instructions for OEHHA, not the State Water Board, which cannot make health determinations in this context. Health-related claims or risk calculations not already published by OEHHA are beyond the scope of the proposed regulation.*

    Commenter: 33.

12. Commenter notes that other organizations (such as Health Canada, the World Health Organization, the Food Safety Commission of Japan, and the Texas Council on Environmental Quality) have reached different conclusions about hexavalent chromium than California.

    Response: *The State Water Board is required to utilize OEHHA's PHG as the health-related basis for establishment of an MCL, and not other organizations' assessments or recommendations. As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible.*

    Commenter: 16.

13. Commenters would like the uncertainty of the health impacts of drinking water containing multiple contaminants to be acknowledged (as they are poorly understood) in the form of additional analysis of the health risks associated with drinking water with multiple contaminants. Commenters ask that any cumulative impact be more carefully considered.

    Response: *Health-related claims or risk calculations not already published by OEHHA are beyond the scope of the proposed regulation. Commenters questioning potential health risks associated with hexavalent chromium (including synergistic health impacts) are encouraged to contact OEHHA to discuss. Therefore, such an analysis was not included in the regulation development process.*

    Commenter: 17.

14. Commenter points out that OEHHA is currently updating the hexavalent chromium PHG, and that if the PHG changes, it would change the State Water Board's estimate of the benefits attributable to the regulation. Given the uncertainty regarding the timing of the PHG update, commenter suggests that the State Water Board should conduct a sensitivity analysis to understand the potential impacts of alternative PHGs on the benefit estimates in the revised SRIA and how those changes would propagate through the economic feasibility analysis.

    Response: *The State Water Board did not perform a sensitivity analysis as suggested because it is not required by statute or regulation and would not affect the outcome of the economic feasibility analysis. While it is true that speculating on a changed PHG (potentially at orders of magnitudes of difference) would change the benefits attributable to the regulation, the economic feasibility analysis is dependent on the estimated costs rather than the estimated benefits, and so the economic feasibility analysis would not change. Pursuant to HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible.*

    Commenter: 2.

15. Commenters assert that moving forward with the proposed MCL while a PHG update is pending is inconsistent with State Water Board's best practice because the State Water Board paused its review of the PCE and TCE MCLs until OEHHA completed reviews on the respective PHGs.

Response: *There are significant differences between previous situations for* tetrachloroethylene *(PCE) and trichloroethylene (TCE) and that of hexavalent chromium. Unlike for hexavalent chromium, the State Water Board was not statutorily required to adopt an MCL by a deadline for PCE or TCE. In addition, for PCE and TCE, the State Water Board was only at the point of assessing whether it should begin the process of updating the MCLs. No work had actually begun to update the MCLs, so waiting for an update of the applicable PHGs did not entail cessation or disruption of work on developing new MCLs that was already progressing. In addition, unlike hexavalent chromium, MCLs already existed for PCE and TCE, providing at least some public health protection.*

Commenter: 2.

16. Commenter claims that human bodies are "miracle machines" that "can process a lot of these things [hexavalent chromium, cyanide, arsenic] as part of our consumption and maybe even use some of them," and then asks where an impact analysis is for the effects of other chemicals in the body over time.

    Response: *An impact analysis as described by the commenter is not required by either the APA or the HSC and is beyond the scope of the proposed regulation. The State Water Board encourages the commenter to look at the PHGs and PHG development processes for other contaminants (including cyanide and arsenic) at OEHHA's webpage for PHGs: https://oehha.ca.gov/water/public-health-goals-phgs. To the extent that information is available, OEHHA is required by statute to include additive and synergistic effects in the development of PHGs (HSC 116365(c)(1)(C)). Health risks and benefits for individual contaminants are considered as part of the MCL review process. Please also see Response D-12 regarding why an MCL is set as close as feasible to the PHG.*

    Commenter: 35.

17. Commenter asserts that since the State Water Board reports that 1 in 2,000 should be impacted within 70 years, and based on a California population of 38 million people, there should be 1,950 annually-reported cases on average for people who have been impacted by drinking hexavalent chromium. Commenter's "quick research" did not uncover anyone impacted (other than those who work in factories and "stick their heads in chemical ponds"), indicating that no one is impacted by hexavalent chromium in drinking water, apart from those in the Brockovich case.

    Response: *The statistic of 1-in-2,000 residents impacted over 70 years refers to drinking water at the MCL of 10 µg/L. Fortunately, some PWS already deliver water to their customers at less than the proposed MCL of 10 µg/L. Therefore, a calculation only utilizing the California population does not capture an accurate estimate for only the PWS that the proposed MCL will impact. The estimate of cancer cases reduced (ISOR Attachment 1, Table 26) is based on the reduction that each individual source would be required to make as a result of the proposed (or alternative) MCL, and the impact of each source is only calculated for the proportional population of each PWS (see ISOR section 5.2.1 for calculation details). Table 26 shows that the proposed MCL is estimated to*

reduce around 13 cancer cases per year (far below the 1,950 cases referred to by the commenter), and an alternative MCL of 1 µg/L is estimated to reduce around 51 cases per year. The difficulty associated with determining the causes of individual cancer cases prevents the kind of comparison suggested by the commenter. Please see Response A-23 for more details regarding cancer data.

Commenter: 35.

E. Economic Feasibility

1. Commenters request confirmation/recalculation of economic feasibility of the proposed MCL because the current analysis falls short. Some commenters assert that the economic feasibility analysis does not employ best practices, lacks analytical rigor and transparency, is results-oriented, does not fully capture the cost of compliance, and/or focuses on unrealistic costs. One commenter requested to see and validate the detailed calculations and assumptions behind the economic feasibility analysis. One commenter asserts that the economic feasibility analysis is required by the "DOF SRIA regulations" as well as the California SDWA.

   Response: *The in-depth analysis and assessment of economic feasibility were performed appropriately and with transparency, and no change was made to the calculation procedures. As detailed in ISOR section 11, the State Water Board analyzed many aspects of economic feasibility: compliance costs were broken down to the system level to allow consideration of how average, median, and high compliance costs would impact California residents; values for alternative MCLs were calculated for each cost or information point (most tables in ISOR Attachment 1 contain the proposed MCL and all 20 alternative MCLs) to allow for alternatives consideration in every aspect; available funding; and alternative compliance options. HSC 116365(b)(3) specifically requires that for the purposes of determining economic feasibility, the cost of compliance be estimated using BAT, not other means or methods of compliance. In addition to the Cost Estimating Methodology in ISOR Attachment 2 (SRIA) and the Documents Relied Upon identified in the ISOR, the cost calculations are available as a Python code that detailed each step and provided additional transparency (ISOR Attachment 2 (SRIA) sections I.3.a.2 and I.3.c.2; the code can be accessed at the Hexavalent Chromium MCL GitHub Repository: https://github.com/CAWaterBoardDataCenter/Hexavalent-Chromium-MCL). Note: While the California SDWA (HSC 116365) requires economic feasibility, there is no such requirement in the DOF SRIA regulations (as asserted by one commenter).*

   Commenters: 2, 4, 7, 8, 27, 30, 34, 52, 67.

2. Commenters note that a key component of the economic feasibility analysis is the assumption that State funding will be sufficient to reduce the cost burden of the MCL. However, because funding is not guaranteed, the economic feasibility analysis is not valid.

Response: *The ISOR provided some state funding estimates to show that funding for drinking water projects—including many of the types of compliance projects that PWS are likely to undertake to comply with the proposed regulation is generally available—but did not rely on the availability of this funding in determining that the proposed MCL was economically feasible. The availability of sufficient funding, either in general or for a particular PWS, is not a prerequisite, requirement, or deciding factor in determining economic feasibility. Therefore, no change was made to the economic feasibility analysis.*

Commenters: 13, 16.

3. Commenters request that the economic impacts of the proposed MCL on individual PWS be considered rather than just looking at averages and overall statewide impact.

   Response: *The economic impacts of the proposed MCL on individual PWS were considered. Compliance costs and impacts were considered down to the system level, and part of the economic feasibility analysis focused on the highest costs incurred by each PWS size category (see ISOR section 11 for details on the economic feasibility analysis). No change to the economic feasibility analysis is required to accommodate the commenter's request.*

   Commenter: 52.

4. Commenters are concerned that the figure of $4.75 per person per year (where costs are spread across all Californians) is not representative of impacts of the proposed regulation, especially for small PWS, and may be misleading. One commenter requested removal of the statement.

   Response: *The figure of $4.75 per person per year was intended to help conceptualize the total cost of the regulation; it is neither a justification of economic feasibility nor representative of the anticipated cost impacts of the proposed regulation to any individual in California. Despite one commenter's request, the statement that the proposed regulation equates to $4.75 per person per year will not be removed from the ISOR because it was illustrative and qualified with the following text: "This value was calculated by dividing the total cost of this regulation by the number of residents in California (39,029,342), not just the people served by water systems expected to be impacted by this MCL." Costs representative of the proposed regulation can be found in ISOR Attachment 1, and specifically Table 9.2A (Estimated Annual Cost per Service Connection by Water System Size), Table 10.2A (Estimated Annual Cost per Person by Water System Size), Table 17.1A (Median Monthly Household Cost Increases), and Table 17.2A (Maximum Monthly Household Cost Increases) show representative costs for community water systems (CWS), broken down by system size. In addition, discussion of affordability burdens (including those specific to small and disadvantaged communities) was included in ISOR section 11.*

   Commenters: 2, 4, 13, 16, 26, 51, 73.

5. Commenter requests that economic effects be shown on a per household/ connection basis, not on a per person basis, because most water bills are paid for by a household.

   Response: *While the proposed regulation included per person costs, it also included discussions of estimated costs borne per household/connection in ISOR sections 11.2.1 (Monthly Household Compliance Costs Analysis), 11.3 (Systems Challenged to Meet the Proposed MCL), 11.4 (Unit Costs Variability), and smaller parts of other ISOR sections (including ISOR Attachment 2 (SRIA)). Economic impacts were shown on a per household/connection basis in ISOR Tables 6, 7, and 9 and ISOR Attachment 1 Tables 9.2A, 9.2B, and 14A. No change to the economic feasibility analysis is required to accommodate the commenter's request.*

   Commenter: 52.

6. Commenter asserts that the Superior Court decision says that water bills increasing by an estimated $5,630 per year (or $469.17 per month) is not acceptable. Commenter asks how the proposed regulation can say costs will only go up by $4 when our "own department" has reported much higher figures in the past.

   Response: *The State Water Board has performed the economic feasibility analysis consistent with the Court ruling. The Superior Court decision did not put forth an opinion regarding the economic feasibility of the regulation, only that economic feasibility was not properly considered: "In remanding this case to the Department, however, the court is not definitively holding that an MCL of 10 ppb is not economically feasible" (California Manufacturers & Technology Association v. State Water Resources Control Board (2017) Super. Ct., Sacramento County, Case No. 34-2015-80001850). In addition, the $4.75 figure was meant as an illustrative value (please see Response E-4 for a fuller explanation of why the $4.75 figure was presented in the ISOR), and is not representative of estimated consumer costs. The costs estimating methodology (ISOR Attachment 2 (SRIA) section I) has been updated since the 2014 rulemaking, resulting in updated costs.*

   Commenter: 44.

7. Commenter suggests a proposed MCL should be reconsidered if found to be unaffordable by a majority of small PWS and could cause disproportionately high water rates, which commenters state conflicts with HSC section 116365 and the Human Right to Water. Commenter requests clarity regarding how a monthly household water bill increase of $53 could be considered economically feasible without ongoing funding to their PWS. As such, commenter recommends revising the ISOR analysis justifying economic feasibility to focus more on costs to be incurred by small PWS.

   Response: *Economic feasibility is not determined based on a single value. As detailed in ISOR section 11.3.7, many aspects were considered in the determination of economic feasibility, including monthly household compliance costs (minimum, maximum, average, and median), Human Right to Water*

status, and the 2022 Affordability Assessment (SWRCB, 2022a). ISOR section 11.3.7 further states "the median monthly cost increases for 94% of the 5.3 million people affected by a hexavalent chromium MCL of 10 µg/L were calculated to be less than $20. This increase in costs is considered economically feasible to the State Water Board, while acknowledging the household compliance costs for some systems may be challenging. In other words, regardless of whether any particular PWS is eligible for funding, because there is the capacity to cover the costs for all of the identified troubled systems for whom compliance may be a challenge with less than 9% of the available state grant and DWSRF principal forgiveness funding, the implementation of the MCL at 10 µg/L is 'capable of being done.'" This excerpt from ISOR section 11.3.7 follows analysis that included breakdowns of costs by PWS size so that costs incurred by small PWS could be specifically considered. These costs were considered appropriately; therefore, the economic feasibility analysis was not revised. Limiting new or revised drinking water standards to only what is affordable to the most disadvantaged PWS would likely result in no new or increased standards ever being developed, despite the fact that the majority of Californians are served by larger PWS that are able to spread the cost of treatment over a larger number of individuals. The result would be that affordability for a small percentage of the population would be driving health protections for the majority of the population. Please see Response A-11 for additional discussion of the Human Right to Water and Responses A-35 and E-29 regarding the assessment of affordability.

Commenters: 18, 26.

8. Commenter requests that the economic feasibility analysis consider the indirect health risks associated with the economic impacts of increased water rates, including maintaining well-being and sanitation, especially in communities with populations at or near poverty levels and/or on a fixed income.

   Response: *Any indirect health risks that resulted from higher water bills would not be quantifiable and are therefore not included in the economic feasibility analysis or rulemaking process. Failing to promulgate a health-based drinking water standard with quantifiable benefits to avoid potential health risks (stemming from other primary causes) would be a detriment to public health, especially when failing to promulgate such a standard would not reduce any health risk currently caused by existing high water bill burdens. In addition, while indirect health risks have been associated with high water bill burdens, the solutions recommended by experts in the field include federal investments in water infrastructure, state oversight of water bills, municipal tiered water pricing, and comprehensive assistance policies for low-income households (Sarango et al., 2023, available at https://journals.plos.org/water/article?id=10.1371/journal.pwat.0000077), none of which are within the scope of the proposed regulation. The ISOR includes consideration of affordability burden in the economic feasibility analysis.*

   Commenters: 9, 18.

9. Commenter requests that the economic feasibility analysis be based on the aggregate cost of water-related utility bills to households, not just the cost of compliance with the proposed MCL. Another commenter states that the COVID-19 pandemic and current inflation rates highlight customer inability to pay under current operational costs.

   Response: *As required in HSC 116365(b)(3), the economic feasibility analysis must consider the cost per customer and the aggregate costs of compliance with the proposed MCL using BAT (see cost tables in ISOR Attachment 1). The State Water Board is not required to consider the "total aggregate cost associated with water supplied to households." Nevertheless, the State Water Board did consider existing water bills (as affordability burden) in ISOR section 11 as part of the economic feasibility analysis. No change was made to the economic feasibility analysis procedures.*

   Commenters: 9, 18.

10. Commenter requests a clear explanation of the cost estimation process used to develop median values in Table 6 (ISOR, p.44). Particularly, commenter points to the discontinuities of cost information provided for small PWS with less than 100 connections ($308).

    Response: *The discontinuities in ISOR Table 6 reflect PWS data. The median cost of $308 for an alternative MCL of 40 µg/L is calculated from a single PWS (see ISOR Attachment 1 Table 7.1A for a breakdown of the number of PWS in each system size category). That system's cost does not change for other alternative MCLs. However, for an alternative MCL of 35 µg/L, the smallest size category contains 3 PWS (the two other costs were $52 and $71, producing a median cost of $71), and for an alternative MCL of 30 µg/L, the smallest size category contains 5 PWS (the other four were $55, $71, $97, and $292, producing a median cost of $97).*

    Commenter: 9.

11. Commenter claims that because the State Water Board has not complied with many of CEQA's fundamental requirements (detailed in a separate CEQA comment letter), the feasibility assessment is not valid.

    Response: *The State Water Board has responded to CEQA comments in section 2 of the Final EIR. Additionally, please see Response A-34 for further discussion of alternatives consideration. It is not feasible to estimate the costs to PWS of CEQA compliance for future, site-specific projects to comply with the proposed regulation, because the details of those future projects—including type, size, location, etc.—are not presently known.*

    Commenter: 13.

12. Commenters assert that the OSHA-related case law cited to help define/determine economic feasibility is inappropriate: a regulation that "threatens the survival of some companies" in the context of private industry is different than a regulation that threatens the survival of public or private PWS that provide an indispensable public service and/or puts drinking water out of reach for many California residents (the

standard applicable to OSHA regulations is too extreme for drinking water regulations). One commenter also states that another appellate court determined that the State Water Board's establishment of MCLs "involves a balancing of public health concerns with questions of technological feasibility and cost" (Groundwater Cases (2007) 154 Cal.App.4th 659, 679).

Response: *Because the third appellate district court in California Manufacturers and Technology Association v. State Water Resources Control Board specifically addressed the meaning of economic feasibility in the context of HSC 116365, the State Water Board is required to follow its holding. In that case, the appellate court rejected that HSC 116365 required a balancing of costs and benefits, concluding that a "feasibility analysis, rather than a cost-benefit analysis" is required by the statute (Cal. Manufacturers and Technology Assn v. State Water Resources Control Board (2021) 64 Cal.App.5th 266, 286). In coming to that conclusion, the court recognized the U.S. Supreme Court had considered similar statutory language in a previous case involving Occupational Safety and Health Administration (OSHA) regulations. In that case, the industry representatives argued that the federal statute required a showing that the costs of the proposed regulation "bore a reasonable relationship to the anticipated benefits to the employees" (Id. at 285 (citing to American Textile Mfrs. Institute, Inc. v. Donovan (1981) 452 U.S. 490, 494)). The U.S. Supreme Court rejected that argument, noting that the statute requires a feasibility analysis. In following that analysis, the appellate court in Cal. Manufacturing & Technology Assn. v. State Water Resources Control Board, noted that the Legislature placed "the public health benefits of safe drinking water above all other considerations, save those that would make attaining those benefits unachievable" (Id.).*

The appellate court affirmed the trial court's conclusion that "regulations are not 'infeasible' because they impose financial burdens on businesses or consumers" (Id. at 282-283 (citing cases related to OSHA)). Like the industries at issue in the OSHA cases, the fact that some PWS will be financially burdened or have challenges meeting a standard does not mean that the standard is infeasible. That conclusion is not undermined by the importance of PWS for providing drinking water service; rather, it is bolstered by it. Because of that importance, the standard for drinking water service in California cannot be determined by the capacity of the least capable PWS in the state. If the drinking water industry in California were to be held only to the standards achievable by its least capable systems, the industry would be held to a standard far lower than what is feasible. As a result, the mandate of the California Safe Drinking Water Act would go unmet, and Californians would suffer the public health impacts of consuming contaminated drinking water. The court in the subject case recognized this when it interpreted the meaning of economic feasibility and looked to cases interpreting OSHA regulations for guidance.

Even if the legislature had intended for no public water system's operations to be challenged beyond the system's individual capacity by the adoption of a primary drinking water standard, there is insufficient evidence that the proposed regulations would cause that result. The possibilities of financial assistance,

technical assistance, alternative means of compliance (such as POU/POE treatment), and consolidation with other PWS would need to be shown inadequate to maintaining continued drinking water service by systems challenged by the proposed regulations. This evidence does not exist.

Commenters: 2, 7.

13. Commenter states that an annual cost of $175 million is enormous for addressing a single drinking water contaminant and that annual expenditures of this magnitude for addressing hexavalent chromium and every contaminant the State Water Board intends to regulate are unlikely to be sustainable, and the ISOR does not demonstrate that it is.

    Response: *The annual costs associated with the proposed regulation were high enough to qualify it as a major regulation pursuant to Government Code section 11346.3(c), requiring a SRIA, which extensively analyzed the costs and the fiscal and economic impacts of those costs. The quantitative cost estimates within the ISOR and SRIA pertain to the proposed regulation alone, and not to future regulations. Cost impacts of new or revised MCLs anticipated to be issued were considered qualitatively in determining what was economically feasible in ISOR section 11.10. With an emphasis on protecting public health (ISOR section 5.2.1), the proposed MCL was determined to be economically feasible (ISOR section 11).*

    Commenter: 25.

14. Commenters assert that the State Water Board failed to analyze whether lower MCLs are economically feasible (capable of being done) as interpreted in *California Manufacturers & Technology Association v. State Water Resources Control Board (2021, 64 Cal.App.5th 266).* One commenter points out that the use of cost-benefit analysis to set an MCL was specifically disapproved by the Court of Appeal and asserts that the State Water Board has failed to meet its obligations under the California Safe Drinking Water Act by failing to set the MCL as close as feasible to the PHG and by improperly relying on overly expensive cost estimates (that rely on centralized treatment and fail to consider health benefits). Another commenter rejects the idea that California must choose between safe and affordable drinking water and asserts that we can do both, especially using a holistic approach.

    Response: *The State Water Board considered a range of MCL values and determined that values less than 10 µg/L would not be economically feasible* (*ISOR section 11.10). The State Water Board did not conduct a cost-benefit analysis, rather a comparison of the cost-effectiveness of alternative MCLs (ISOR section 11.5) in accordance with the requirements for the SRIA (1 CCR 2003).*

    Commenters: 14, 15, 24, 31, 36, 40, 49, 54, 55, 57, 61, 62, 64, 66, 69, 70.

15. Commenter points out that the courts have defined economic feasibility, as used in HSC 116365, to mean “economically capable of being done; that is, capable of being done given the management of domestic or private income and expenditure,” and that regulations are not infeasible because they impose financial burdens on

businesses or consumers. Commenters assert the State Water Board's job is not to balance or optimize costs and benefits, but to establish the most protective MCL "capable of being done."

Response: *As discussed in ISOR section 11, the State Water Board agrees with the above interpretations of economic feasibility and, as such, the proposed MCL of 10 µg/L is the lowest MCL currently "capable of being done."*

Commenter: 15.

16. Commenter states that the State Water Board improperly omitted a BAT (stannous chloride), which predisposed its economic feasibility analysis to reject lower MCLs (because only expensive treatments were considered). Commenter asserts that for the instances that stannous chloride can be both technically feasible and cost effective, it should have been used to estimate costs.

    Response: *Stannous chloride has not been designated as BAT, and therefore cannot be used to estimate compliance costs for the purpose of determining economic feasibility (HSC 116365(b)(3)). Please see Response B-4 regarding why the application of stannous chloride without filtration has not been designated as BAT.*

    Commenter: 15.

17. Commenters urge the State Water Board to recalculate the [economic feasibility] analysis to take into account aspects that would make the MCL more affordable, such as savings (e.g., from no longer needing to purchase bottled water) and realistic compliance outcomes. One commenter asserts that not including these savings is a violation of the California Safe Drinking Water Act.

    Response: *HSC 116365(b)(3) requires that economic feasibility be considered using BAT centralized treatment costs (rather than any alternative, more affordable options), so further quantification/monetization of benefits would not alter the economic feasibility analysis and was not performed. While the monthly cost of purchasing bottled water for a 3-person household was included in ISOR Attachment 2 (SRIA) section B.3, the data needed to quantify statewide benefits is not currently available (e.g., who already buys bottled water and which compliance options would work for each PWS). Please also see Response E-21 regarding monetizing benefits and Response J-5 regarding the consideration of other cost savings. Additional information regarding cost-benefit analysis and the California Safe Drinking Water Act is available in Response E-27.*

    Commenters: 15, 49, 57.

18. Commenter states that there has not been but would like there to be a robust [economic feasibility] analysis of the real cost and implications to food producers.

    Response: *Compliance with the MCL is not required by food producers that are not PWS. Accordingly, costs to food producers who voluntarily choose to meet the MCL are not included in the economic feasibility analysis. Please see Response A-15 for additional discussion regarding food producers.*

Commenter: 47.

19. Commenter states that economic feasibility should distinguish between private businesses and public and private PWS but instead the analysis ignored the essentiality of the services provided by these PWS.

    Response: *The proposed regulation applies to PWS. Impacts on businesses that are PWS are discussed in ISOR Attachment 2 (SRIA) sections C.2 and C.3, and impacts on businesses served by PWS are discussed in section C.5; impacts are also summarized in the 16 June 2023 Notice of Proposed Rulemaking. The economic feasibility analysis was not changed.*

    Commenter: 2.

20. Commenter claims that averaging was used extensively to mask the extent of economic impacts on individual PWS and their ratepayers (starting with section 11.3.1 and cost-effectiveness analysis).

    Response: *The State Water Board has appropriately conducted the economic feasibility analysis and no change was made to the economic feasibility analysis procedure. The cost-effectiveness analysis (including section 11.3.1) includes cost averages for different groups, but also includes many other cost metrics, such as medians, maximums, summations, and individual customer costs. For transparency, these costs, the data used to develop the costs, the cost tables, and the Python code (which includes each step) were made available to the public and identified in the ISOR and its attachments. In particular, the Python code can be accessed at the Hexavalent Chromium MCL GitHub Repository: https://github.com/CAWaterBoardDataCenter/Hexavalent-Chromium-MCL (ISOR Attachment 2 (SRIA) sections I.3.a.2 and I.3.c.2).*

    Commenter: 2.

21. Commenter asserts that the State Water Board prepared an improper economic feasibility assessment by focusing on statewide costs (rather than costs borne by PWS and individuals) and failed to consider numerous cost savings and health benefits. Commenter states that this created an analysis that is higher than the real costs borne by PWS and individuals, providing false justification for a high MCL when a lower MCL is likely economically feasible.

    Response: *The State Water Board has appropriately conducted the economic feasibility analysis and no change was made to the economic feasibility analysis procedure. The calculated costs used in the proposed regulation were conservative by necessity, when there were no data to show that costs would be lower. The costs presented in the proposed regulation have been revised in a multi-year process that included multiple rounds of public comments. Even if health benefits or other savings were monetized, they would likely not change the outcome of the regulation; importantly, the economic feasibility analysis required by the California Safe Drinking Water Act does not include a cost-benefit analysis, as explained by the court in California Manufacturers & Technology Association v. State Water Resources Control Board (2021) 64 Cal.App.5th 266. While the ISOR included statewide costs, it also included*

discussions of estimated costs borne by PWS and individuals in sections 11.2.1 (Monthly Household Compliance Costs Analysis), 11.3 (Systems Challenged to Meet the Proposed MCL), 11.4 (Unit Costs Variability), 11.6 (Economic Feasibility for NTNCWS), 11.7 (Economic Feasibility for TNCWS), and smaller parts of other ISOR sections (including ISOR Attachment 2 (SRIA)).

Commenter: 15.

22. Commenter claims that a meaningful economic feasibility analysis cannot be performed until the PHG is updated.

    Response: *Please see Response D-4 regarding the PHG update and Response D-14 regarding the PHG's effect on the economic feasibility analysis.*

    Commenter: 13.

23. Commenter requested to see the paper on economic feasibility.

    Response: *The White Paper Discussion on Economic Feasibility Analysis in Consideration of a Hexavalent Chromium MCL is available on the State Water Board's website at https://www.waterboards.ca.gov/drinking_water/programs/documents/cr6econwp.pdf. This document was not relied upon for the development of the proposed regulation; the document is provided per direct request from the commenter.*

    Commenter: 44.

24. Commenter supports the 2017 court ruling that requires the State Water Board to consider the economic feasibility of any new proposed regulation and suggests that the State Water Board review that ruling again.

    Response: *The State Water Board has reviewed the 2017 court ruling and determined that the current regulatory proposal is economically feasible and consistent with the ruling. No change was made to the economic feasibility analysis.*

    Commenter: 29.

25. Commenter asserts that the conclusion that the proposed regulation is economically feasible is dismissive of the harsh economic realities facing many low-income families in California. Another commenter asserts that the proposed regulation is "inhumane," when considering that the bulk of the economic burden will be borne by a relatively small number of cost-burdened households

    Response: *Rather than dismissing the challenges faced by PWS and cost-burdened ratepayers, when determining the economic feasibility of the proposed regulation, the State Water Board extensively considered impacts to PWS and ratepayers on the HR2W list and those facing affordability burdens (ISOR section 11.3.7). Rather than being "inhumane," the adoption of the proposed regulation advances the human right to water by setting a primary drinking water standard for hexavalent chromium that is protective of public health. As described in the ISOR, the proposed regulation would reduce the risk*

of cancer and health effects from liver toxicity due to hexavalent chromium (ISOR section 5.2.1).

Commenters: 2, 19.

26. Commenter requests that statewide drought conditions, stressed local water supplies, and household budgets of disadvantaged communities be considered.

    Response: *Statewide drought conditions were indirectly considered by using data from a large window of time (more than 11 years) to account for changes in water quality due to drought so that even the worst drought conditions would be accounted for. Household affordability burden was considered and used in ISOR section 11. However, site-specific conditions (such as local water supplies) were not considered due to a lack of data availability. Additionally, Disadvantaged Community (DAC) status was considered throughout ISOR section 11, though it was ultimately not used to estimate financial assistance (ISOR section 11.2 explains that it did not correlate with a medium or high affordability burden). With regard to drought conditions, PWS can comply with the MCL through a variety of means, which may be useful (and provide flexibility) in times of drought. Additional considerations were not added to the economic feasibility analysis.*

    Commenter: 22.

27. Commenters suggest that a cost-benefit analysis should be conducted/improved (by weighing the added cost of implementation with the public health benefit), as required by the California Safe Drinking Water Act and DOF SRIA regulations. One commenter states that any new drinking water standards should produce public health benefits that are worth the added cost of implementation, and another commenter specifically requests that the State Water Board assign a dollar value to human lives for the purposes of determining monetary savings.

    Response: *California Manufacturers & Technology Association v. State Water Resources Control Board (2021) 64 Cal.App.5th 266 determined that a cost-benefit analysis is not required under the California Safe Drinking Water Act. The State Water Board has appropriately conducted the economic feasibility analysis and fiscal and economic impact analysis consistent with the California Safe Drinking Water Act and DOF SRIA regulations, respectively; no change was made to the economic feasibility analysis and fiscal and economic impact analysis procedure.*

    Commenters: 2, 33, 47.

28. Commenters note that the ISOR does not indicate that the cost of future regulations was considered for the proposed MCL or higher alternative MCLs, and as such, does not properly balance the factors the State Water Board is required to consider under the Safe Drinking Water Act and the Human Right to Water Act. Commenters assert that this establishes a dangerous precedent for future drinking water standards to focus narrowly on the feasibility of the individual MCL while ignoring the cumulative impact of existing and new standards on affordability.

    Response: *The impact of future regulations was considered qualitatively for the proposed MCL and for all alternative MCLs (ISOR section 11.10). However,*

estimating the costs of future regulations is beyond the scope of this regulation. No change was made to the economic feasibility analysis.

Commenter: 8.

29. Commenters would like the cost burden of the proposed MCL to be analyzed with the cumulative burden of existing and projected or reasonably anticipated future drinking water regulations as part of the economic feasibility analysis. Commenters request that the regulation include an analysis of recent trends in water rates and known instances of disproportionate water affordability burdens, a complete list of regulatory priorities indicating where each contaminant is in the regulatory queue, and order-of-magnitude estimates of potential compliance costs based on a preliminary analysis of available occurrence and treatment cost data.

    Response: *These requests are beyond the scope of the proposed rulemaking. The impact of future regulations was considered qualitatively for the proposed MCL and for all alternative MCLs (ISOR section 11.10). However, it is not practical to evaluate costs using the cumulative burden of existing and projected/future drinking water regulations due to the amount and type of data needed and the uncertainty associated with such an analysis. The available information on recent water rates and known instances of disproportionate water affordability burdens has been included in the analysis by considering the "medium" and "high" affordability burdens (from the 2022 Drinking Water Needs Assessment (SWRCB, 2022a)) in ISOR section 11. Please also see Response E-1 regarding cost burdens and the requirements for determining economic feasibility. The 2024 regulatory priorities are available on the State Water Board's website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2024/rs2024-0009.pdf. Therefore, such an analysis is not included within this proposed regulation.*

    Commenters: 2, 16.

30. Commenter asserts that DDW has failed to balance the high costs with public health considerations, as required by the California Safe Drinking Water Act and the appellate courts by failing to critically compare and analyze costs of the proposed and alternative MCLs and failing to use a proper baseline to compare and analyze the public health benefits of the proposed and alternative MCLs. Commenter also states that aggregate costs for the proposed MCL compared to alternative MCLs were not critically analyzed (alternative MCLs considered but dismissed have significantly lower aggregate costs of compliance, but the impacts of aggregate costs on impacted PWS and residents were not analyzed, especially with an appropriate baseline).

    Response: *Please see Response E-27 regarding balancing/comparing costs and benefits, Response G-1 regarding requirements to adopt the proposed MCL, and Response A-23 regarding baseline requirements. There is no mandate to "balance" the costs with the benefits. In fact, HSC 116365 disallows such an approach by requiring the primary emphasis to be placed on the protection of public health. Aggregate costs (and their associated impacts) were*

analyzed in the SRIA (ISOR Attachment 2), and the comparison of the impacts of the alternatives on PWS and residents are available in ISOR Attachment 1 Tables 7.2A, 10.2A, 7.2B, and 10.2B, were analyzed in ISOR section 4.4.4 (Breakdown of Costs and Economic Impacts), and further compared in ISOR sections 11.2.1 (Monthly Household Compliance Cost Analysis), 11.3 (Systems Challenged to Meet a New MCL of 10 ug/L), 11.4 (Unit Cost Variability), and 11.5 (Cost-Effectiveness Alternative for CWS). No change was made to the economic feasibility analysis.

Commenter: 7.

31. Commenter notes that a cost not considered by the regulation is the ability of PWS to raise rates considering other regulatory burdens and public sentiment. Commenters assert that a PWS that has recently raised rates could be unable to make additional rate increases based on regulatory or public opinion constraints, stating that "significantly higher rates would increase the public's distrust in water purveyors."

    Response: *The individual ability of PWS to raise water rates and other site-specific information and conditions were not considered due to lack of data. However, ISOR section 11.10 qualitatively considered future regulation impacts, one of which is the ability of PWS to raise rates.*

    Commenters: 11, 18.

32. Commenters say that the proposed MCL conflicts with HSC 116365 (a) and (b) (part of the California Safe Drinking Water Act), which requires the MCL to be set as close to the PHG as is technologically and economically feasible and at a level that avoids any significant risk to public health. One commenter notes that the California Safe Drinking Water Act articulates a state policy to "reduce to the lowest level feasible all concentrations of toxic chemicals that, when present in drinking water, may cause cancer, birth defects, and other chronic diseases," expressing that while the State Water Board should consider cost, the Safe Drinking Water Act expresses an intent to establish a safe drinking water program.

    Response: *As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible. While lower MCL values may be technologically feasible, 10 µg/L was determined to be as close to the PHG as is economically feasible at this time (ISOR section 11).*

    Commenters: 15, 37.

33. Commenters state that they will not be able to afford improvements needed to comply with the proposed MCL, and/or the proposed level would harm or significantly impact their community/business financially. One commenter is concerned that the State Water Board has not fully considered the statewide cost impacts, including for all poor and distressed communities.

    Response: *The State Water Board is aware that some communities may be affected in different ways by hexavalent chromium, the proposed regulations, or both. As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible, which is defined as being*

capable of being done given the management of domestic or private income and expenditure (ISOR section 11.1). The State Water Board has determined that the proposed regulations are economically feasible. Commenters may also find Response A-30, regarding blending as an alternative to centralized treatment, to be helpful.

Commenters: 12, 18, 29, 45, 47, 51, 52, 58, 63.

34. Commenter requests additional economic feasibility analysis that prioritizes supporting PWS to achieve a more health-protective MCL rather than highlighting the challenges of compliance.

    Response: *HSC 116365 requires the economic feasibility analysis to be based on the cost of BAT, so additional analysis for other considerations (such as additional funding) would not alter the results of the economic feasibility analysis.*

    Commenter: 14.

35. Commenter states that the MCL was not arrived at scientifically, but was a determination based upon a subjective perusal of scientific papers that did not determine what levels are appropriate.

    Response: *The Documents Relied Upon provides a full list of scientific papers used in the development of the proposed MCL. However, the proposed MCL was determined based on economic feasibility (ISOR section 11) because lower values are technologically feasible to achieve. Further details regarding the framework used to develop the proposed MCL are available in ISOR section 4.*

    Commenter: 63.

36. Commenter states that the range of estimated costs set forth in the Staff Report and attached tables range from $85 to $998 per month and average about $300 per month (from Table 16A), which represent a significant hardship for their customers and other similar small PWS.

    Response: *The referenced costs are draft costs released in March 2022. Cost estimates for the proposed regulation are lower (see ISOR Attachment 2 (SRIA)). Please see Response E-33 regarding requirements to adopt the proposed MCL.*
    Commenter: 20.

F. Funding

1. Commenter asks that the State Water Board partner to help make resources available to all PWS and domestic well users, as the level of the proposed MCL will likely impact the resources available to help contaminated domestic wells.

    Response: *Domestic wells that are not part of a PWS would not be required to comply with the proposed regulation. The State Water Board's Division of Drinking Water District Offices provide technical support to PWS and funding opportunities are available from the Division of Financial Assistance through*

loans and grants. Please also see Response G-1 regarding the requirements related to the proposed MCL and Response F-11 pertaining to resources for financial assistance.

Commenter: 60.

2. Commenters request that funding available to assist with compliance needs be clearly identified and ensured for PWS (especially small PWS). Some commenters state that funding would be necessary to comply with the MCL, and/or that questions of affordability and economic feasibility turn on a commitment of state funding. One commenter would like spikes in demand for funding and funding shortages incorporated into the economic analysis, as well as consideration of solutions to assist more challenged PWS.

   Response: *The analysis, availability, identification, or commitment of state funding to pay for compliance projects by PWS is not a prerequisite or requirement for the State Water Board's adoption of the proposed regulation. Rather, the Board considered the possibility of state financial assistance to PWS for addressing hexavalent chromium as a potential mitigating factor for affordability and provided estimates for illustrative purposes as discussed in Response F-3. Other aspects (such as spikes in demand for funding, funding shortages, and solutions to assist more challenged PWS) were not incorporated into the fiscal and economic impact analysis because doing so would not change the outcome of the economic feasibility analysis, which is not dependent on state funding. Regarding the prioritization of funding and financial assistance programs: the State Water Board adopts intended use plans, informed by HSC 116326, to guide funding priorities. The most recent intended use plan is available at https://www.waterboards.ca.gov/drinking_water/services/funding/SRF.html. Please also see Response F-11 pertaining to resources for financial assistance.*

   Commenters: 2, 4, 10, 16, 21, 22, 26, 30, 34, 72.

3. Commenters object that financial assistance needs have been understated, and/or the availability and reliability of State funding has been overstated.

   Response: *Funding needs were estimated as illustrative figures to provide information to State Water Board members and the public; no assertion was made that suggested the illustrative figures were indicative of future funding availability. The availability of sufficient funding, either in general or for a particular PWS, is not a prerequisite, requirement, or deciding factor in determining economic feasibility. Further, nothing about this action changes the existing process for pursuing financial assistance, and funding has generally been available for these types of projects. The State Water Board's funding program and their efficiency are outside the scope of this rulemaking.*

   Commenters: 2, 16, 19, 33, 67, 73.

4. Commenter requests that DDW estimate the annual demand for grant funding to cover capital costs over the first four years of the proposed MCL, or at a minimum make the information available so that impacted PWS and other stakeholders can

anticipate the near-term spikes in demand and other impacts that are likely to result from the proposed regulation.

Response: *The requested information can be derived from material provided in the ISOR and the identified Documents Relied Upon. The demand for grant funding that covered capital costs would be equal to the estimated capital costs (shown for each source in ISOR Attachment 5) summed for each year based on the applicable compliance deadlines. The requested information can also be calculated by using data from the State Water Board databases (SWRCB, 2021b and 2021c) to create running annual averages for each source, and creating a list of sources (and their associated system information) with any running annual average above the proposed MCL. Costs can then be calculated for each of the listed sources following the methodology detailed in ISOR Attachment 2 (SRIA) section I. Affordability information is available for each system in the 2022 Drinking Water Needs Assessment (SWRCB, 2022a).*

Commenter: 2.

5. Commenter states that hexavalent chromium is considered naturally occurring for their PWS and has been ineligible for funding in the past because there was no contamination source.

   Response: *Funding does not depend on whether there is a contamination source for a contaminant. More information on drinking water funding can be found at https://waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWPfunding.html.*

   Commenter: 11.

6. Commenters urge the State Water Board to provide the necessary technical assistance and financial resources to support small PWS in complying with the best available methods (not necessarily the cheapest), and to implement a financial plan to support these PWS. Some commenters specifically urge the Board to ensure grant funding and direct operation and maintenance support to aid PWS serving disadvantaged communities to ensure that implementation does not make water more unaffordable. Some commenters would like the State Water Board to proactively plan to provide funding and support to impacted PWS, particularly those providing water service to disadvantaged communities though the Safe and Affordable Funding for Equity and Resilience (SAFER) and other funding programs. Commenters state that water can be both safe and affordable, funding for eligible recipients should be expedited, and/or that the means to subsidize small PWS costs must be developed by the State Water Board. One commenter notes that funding for eligible PWS will be critical for timely compliance.

   Response: *While technical and financial assistance are outside the scope of the proposed regulation, resources for both are currently available for PWS: information on the State Water Board's Technical Assistance Funding Program is available at https://www.waterboards.ca.gov/water_issues/programs/grants_loans/tech_asst*

_funding.html, and information on funding opportunities is available at https://www.waterboards.ca.gov/water_issues/programs/grants_loans/. In addition, funding plans are regularly updated and available for public comment. No change was made to the proposed regulation regarding funding.

Commenters: 15, 20, 24, 27, 39, 40, 59.

7. Commenters continue to advocate for the establishment of a statewide low-income rate assistance program to aid low-income households struggling with unaffordable water and sewer bills.

   Response: *The comment is appreciated. However, a statewide low-income rate assistance program is outside of the scope of this regulation. No change was made to the regulation to accommodate these suggestions.*

   Commenters: 15, 40.

8. Commenters express concern regarding unresolved issues with State funding. Some commenters state that State funding sources cannot be relied on and that PWS would struggle financially to comply with the MCL, especially in light of future planned drinking water regulations.

   Response: *The comment is appreciated. Please see Response F-2 regarding funding and Response E-33 regarding struggling to comply with the MCL. Issues with State funding are outside of the scope of this regulation and no change was made to the regulation regarding funding.*

   Commenters: 16, 27.

9. Commenters request that the State Water Board's analysis better address the State Water Board funding process, which has proven to be difficult and time-consuming for many PWS, especially the smallest and those most in need. Some commenters point to the following practical factors that should be anticipated and considered: submission requirements for applicants; personnel time, expertise, and expenses needed for a CWS to prepare, submit, and support a viable funding application; timeline from submission to approval to receiving fiscal support; terms and conditions for receipt of state funds; and ability to receive adequate funding for capital improvement planning and implementation.

   Response: *Issues with the funding process are outside of the scope of the proposed regulation and no change was made to the regulation regarding funding. The compliance schedule was included in this regulation to account for a variety of possible compliance delays, including the time needed to design, pilot, and integrate treatment. The proposed compliance schedule is necessary to stagger demand for materials and services related to design and construction of treatment facilities (ISOR section 5.3). In addition to the compliance schedule purpose outlined in the ISOR, an additional potential benefit could be that PWS, especially small and/or disadvantaged PWS, may use the time allotted by the compliance schedule to engage in and navigate the funding process.*

   Commenters: 13, 16.

10. Commenters state that the use of $30 per month per household as an affordability threshold for cost increases has no meaningful explanation and/or is arbitrary.

    Response: *As stated on page 43 of the ISOR: "A $30 monthly cost increase is used to approximate financial assistance needs and is not intended to convey that $30 is necessarily an unaffordable value. Higher cutoffs will result in lower funding estimates, and lower cutoffs will result in higher funding estimates. This analysis could be repeated with other cutoff values to determine sensitivity."*

    Commenters: 2, 13.

11. Commenter states that the capital costs expended by PWS and any grant money used to comply with the proposed regulation will not be refundable, and that once these funds are expended, they will no longer be available to treat other contaminants in drinking water.

    Response: *The State Water Board agrees that the costs expended by PWS to comply with the proposed regulation would not be refundable.*

    Commenter: 2.

G. Recommending Lower MCL

1. Commenters assert that the proposed MCL prioritizes compliance costs over the protection of public health because they state that feasible MCL standards closer to the PHG exist. Several commenters ask: "Are we saving money or are we saving lives?" Commenters assert that the State Water Board's first responsibility is to protect the people of California and that the proposed MCL conflicts with the Board's mission "to preserve, enhance, and restore the quality of California's water resources, and drinking water" for the protection of the environment, public health, and all beneficial uses. Some commenters assert that this is a failure to comply with the California Safe Drinking Water Act. Commenters report that hexavalent chromium is toxic, that it is killing people (in some cases, entire families), and that the chemical being natural or organic doesn't matter (so is lead, mercury, cadmium, etc.). Commenters ask the Board to take action and use this MCL to protect lives. Some commenters state that they would rather pay with money than with the lives of their children or community members.

    Response: *The State Water Board is aware that some communities may be affected in different ways by hexavalent chromium, the proposed regulations, or both. As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible. While lower levels may be technologically feasible, 10 µg/L was determined to be as close to the PHG as is economically feasible at this time (ISOR section 11). In addition, the proposed regulation is a minimum standard, and PWS may treat to lower levels if they choose. Please see Response E-27 regarding compliance with the California Safe Drinking Water Act.*

    Commenters: 15, 49, 50, 53, 54, 56, 60, 70.

2. Commenters express disappointment regarding how long it took to propose the hexavalent chromium MCL, stating that this delay has caused continued health impacts and a reduction of public trust in the state's drinking water quality. Some commenters see the proposed level of only 10 µg/L after such a delay as disheartening and insulting. One commenter asserts that the proposed MCL is a give to polluters and recalcitrant PWS who are dragging their feet, and that it is an embarrassment to the administration.

   Response: *The comment is appreciated. The State Water Board has been working diligently to promulgate this rulemaking. In addition, the State Water Board conducted an extensive economic feasibility analysis and determined that 10 µg/L is as close to the PHG as technologically and economically feasible, pursuant to HSC 116365.*

   Commenters: 14, 15, 64, 70.

3. Commenter asks that the State Water Board protect all Californians with an MCL that protects public health.

   Response: *Promulgating the proposed MCL will advance the goal of protecting all Californians.*

   Commenter: 60.

4. Commenters thank those at the State Water Board for the work they have been doing and encourage others to be involved because every voice matters.

   Response: *The support is appreciated.*

   Commenter: 56.

5. Commenters note that when a health-protective MCL does not exist (as they state will be the case with the proposed MCL), the burden of dealing with contaminated water falls on communities, compromising everyone's health (especially children). Commenters assert that the proposed MCL will leave too many communities without protection and allows responsible parties to avoid liability.

   Response: *Please see Response G-1 regarding requirements to adopt the proposed MCL. In addition, the proposed regulation is a minimum standard, and PWS may treat to lower levels if they choose.*

   Commenters: 14, 15.

6. Some commenters state that they do not and/or have not ever had clean water. Some commenters urge the State Water Board to listen to the testimonies of community members and to urgently invest in their communities through helping provide clean water because science has demonstrated the health impact, and cancer is expensive. One commenter reminds us that this is about the people drinking hexavalent chromium and points out that as PWS representatives comment that the MCL should be higher to protect ratepayers, those same ratepayers are asking for a lower, more health-protective MCL.

   Response: *The comment is appreciated.*

Commenters: 38, 42, 48, 50, 65, 70.

7. Commenter state that if PWS need to cut costs, they should cut corporate bonuses and donations to legislators, especially because they make money from taxpayers. Commenter does not want any PWS to be permitted to have significantly higher hexavalent chromium levels.

   Response: *The comment is appreciated. However, it is outside the scope of this regulation. The State Water Board does not dictate the internal financial management of PWS. All PWS are required to comply with the MCL by their applicable compliance date.*

   Commenter: 69.

8. Commenter claims that an MCL that allows a default risk of 1 in 2,000 cancer cases does not prioritize public health. Commenter states that the three prongs of the human right to water are access, affordability, and quality, and one should not take a backseat to another. Commenter states that if an MCL is easy to come into compliance with, it will not cost much, but it also will not improve water quality. Innovative solutions to affordability (such as the Water Arrearages Program and the $1.5 billion for drinking water infrastructure) have shown us that these alignments are possible. Commenter states that the focus of the MCL should be public health.

   Response: *Please see Response G-1 regarding requirements to adopt the proposed MCL. The proposed regulation is also a minimum standard, and PWS may treat to lower levels if they choose. In addition, it is possible that lower levels will become more feasible in the future, which will be evaluated during MCL reviews, which take place every 5 years. Information regarding MCL reviews can be found on the State Water Board's website at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MCLReview.html.*

   Commenter: 64.

9. Commenters request that the State Water Board consider how assistance for domestic well users is impacted by the proposed MCL. Many programs for identifying domestic well clusters as consolidation targets or replacement water programs require a well to test above an established MCL. This means that by setting a higher MCL, the Board is leaving many domestic well owners without support for water that is still unsafe. The Board must consider these users and how a higher MCL harms their right to safe and accessible drinking water when adopting an MCL.

   Response: *Please see Response G-1 regarding requirements to adopt the proposed MCL. The State Water Board has determined that an MCL of 10 µg/L is as close to the PHG as economically and technologically feasible. Domestic well owners are not subject to the proposed MCL insofar as they are not PWS, but they will still benefit to the extent that they choose to comply with it. Local funding programs for domestic well owners are outside the scope of the proposed regulation.*

   Commenter: 15.

H. Recommending Higher MCL; Objecting to Adoption of MCL

1. Commenters express general opposition to the regulation.

   Response: *The State Water Board has the authority and is mandated, via HSC 116365 and 116365.5, to adopt an MCL for hexavalent chromium that is as close to the PHG as technologically and economically feasible. The State Water Board cannot ignore these mandates. As such, the State Water Board is proceeding with the regulation. In addition, the State Water Board must use OEHHA's PHG as the health-related basis when establishing an MCL. The ISOR and supporting documentation support the State Water Board's conclusion that the proposed MCL is economically feasible.*

   Commenters: 11, 25, 29, 33, 63, 72.

2. Commenters state that there is a strong basis for setting a higher MCL, based on cost-effectiveness. One commenter suggests that "a less stringent MCL should be considered to account for both public health interests and economic feasibility by water treatment systems."

   Response: *MCLs are not selected based on cost-effectiveness. As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible. The level of 10 µg/L was determined to be as close to the PHG as is economically feasible at this time, therefore accounting for both public health interests and economic feasibility (ISOR section 11).*

   Further, Government Code 11346.3(e) states that the "baseline for the regulatory analysis shall be the most cost-effective set of regulatory measures that are equally effective in achieving the purpose of the regulation in a manner that ensures full compliance with the authorizing statute or other law being implemented or made specific by the proposed regulation." However, different MCL levels with different attributable health benefits are not equally effective in achieving the purpose of the regulation. Rather, the health benefits were maximized to the extent technologically and economically feasible, as required by HSC 116365.

   Commenters: 2, 5, 7, 10, 18.

3. Commenter points out that the proposed MCL is ten times stricter than the level set by the federal government, which automatically hurts the ability of California businesses to compete with businesses in other states (Government Code 11346.3(a)(2)).

   Response: The United States Environmental Protection Agency (*U.S. EPA) has no standard that is specific for hexavalent chromium in drinking water. The federal MCL (100 µg/L) and state total chromium MCL (50 µg/L) limit total chromium (a combination of trivalent and hexavalent chromium). The State Water Board is mandated, via HSC 116365 and 116365.5, to adopt an MCL for hexavalent chromium that is as close to the PHG as technologically and economically feasible. As stated in the Notice of Proposed Rulemaking and ISOR Attachment 2 (SRIA), the State Water Board has determined that there may be a significant, statewide adverse economic impact directly affecting*

businesses (see the Notice of Proposed Rulemaking, p.11, and ISOR Attachment 2 (SRIA) sections C and E for more detailed discussions).

Commenter: 19.

4. Commenter suggests that the State Water Board should limit its action to informing people about hexavalent chromium, and let people decide if they want bottled water.

   Response: *The State Water Board is mandated via HSC 116365 and 116365.5, to adopt an MCL for hexavalent chromium that is as close to the PHG as technologically and economically feasible. The State Water Board cannot ignore these mandates. In addition, bottled water is not required to be tested for hexavalent chromium.*

   Commenter: 63.

5. Commenter suggests that the State Water Board should reject the proposed 10 µg/L MCL for hexavalent chromium and find that 10 µg/L is unjustified given the impact it would impose on businesses, individuals, and the state's economy.

   Response: *Pursuant to HSC 116365(a), the State Water Board is mandated to adopt an MCL as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. The State Water Board has determined that the proposed MCL is economically feasible and is proceeding with the rulemaking.*

   Commenter: 19.

6. Commenters would like an MCL of 25 µg/L to be adopted rather than 10 µg/L.

   Response: *Pursuant to HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible. An MCL of 10 µg/L was determined to be as close to the PHG as is technologically and economically feasible at this time (ISOR section 11) and has been adopted by the State Water Resources Board.*

   Commenters: 19, 22, 52.

7. Commenter suggests targeted remediation (implied instead of an MCL) for groundwater contaminated by PG&E to keep water affordable for everyone else.

   Response: *The suggestion to conduct targeted remediation for PG&E-contaminated groundwater is beyond the scope of the regulatory action. However, the Lahontan RWQCB's ongoing work associated with the PG&E Hinkley site, including clean-up actions and orders can be found at the Lahontan RWQCB PG&E Hinkley Chromium Cleanup webpage (https://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/). The State Water Board is statutorily mandated to establish drinking water standards for the protection of public health, including a standard (MCL) for hexavalent chromium.*

   Commenter: 12.

8. The proposed regulation will create more criminals by criminalizing and punishing people for doing something that was previously legal.

   Response: *The suggested resulting legal implications and actions referenced by the commentator are beyond the scope of this regulatory action. The proposed regulation would not create any new criminal liability in addition to what is already provided in HSC 116730.*

   Commenter: 33.

9. Commenter states that the proposed MCL is a mandate where the government is taking by force without compensation, taking away choices and demanding action. Commenter asks whether the State Water Board is willing to kill people to enforce its will (and clarifies that this was not a rhetorical question).

   Response: *Under HSC 116365 and 116365.5, the State Water Board is required to adopt an MCL for hexavalent chromium.*

   Commenter: 33.

10. Commenters suggest setting the MCL at 30 µg/L to avoid litigation and so that the majority of wells that serve Californians would be available for use and mitigate the need for costly treatment to only slightly improve water quality.

    Response: *The State Water Board has the authority and is mandated, via HSC 116365 and 116365.5, to adopt an MCL for hexavalent chromium that is as close to the PHG as is technologically and economically feasible. The State Water Board cannot ignore these mandates. Rather than the suggested 30 µg/L, an MCL of 10 µg/L was determined to be as close to the PHG as is technologically and economically feasible at this time (ISOR section 11).*

    Commenters: 12, 44.

11. Commenters request that the State Water Board ignore the current rulemaking and instead place the MCL at 50 µg/L (if the State Water Board believes that the World Health Organization and Health Canada are credible organizations).

    Response: *As mandated in HSC 116365, the MCL must be set as close to the PHG as is technologically and economically feasible. An MCL of 10 µg/L was determined to be as close to the PHG as is technologically and economically feasible at this time (ISOR section 11). The State Water Board may not ignore the PHG in favor of other health-related information or goals and can only use the PHG to determine health benefits or risks.*

    Commenter: 25.

12. Commenter asserts that the proposed regulation will raise water rates (i.e. make people pay more for water) without appreciable health improvement or benefit to customers.

    Response: *The State Water Board is aware that some communities may be indirectly required to pay more for water as a result of the proposed regulation. However, the costs of treatment come with health benefits, as described in ISOR section 5.2.1.*

Commenters: 12, 33.

13. Commenter is concerned with potential impacts to PWS complying with the proposed MCL, especially in light of the Errata Sheet.

    Response: *State Water Board is aware that some communities may be affected in different ways by hexavalent chromium, the proposed regulations, or both. The proposed MCL has been set at the lowest level economically feasible, as required by statute.*

    Commenter: 34.

I. Analytical Methods, Monitoring, and Detection

1. Commenters request that maximum holding time of 14 days and sample preservation with one of the buffers described in EPA Method 218.7 for samples analyzed by either EPA Method 218.6 or EPA Method 218.7 are included in the proposed regulation.

    Response: *As specified in proposed 22 CCR 64415, analyses would be required to be made in accordance with the methods that are incorporated by reference. The proposed regulation was not changed; however, evaluation of holding time modifications may be considered in a future rulemaking. Please see ISOR sections 7 and 10.1 for additional discussion regarding analytical methods.*

    Commenter: 13.

2. Commenters requested clarification of the level of accuracy required for laboratories using EPA Method 218.6 to meet the DLR. Section 9.2.4.2 of EPA Method 218.7 indicates that 50-150% recovery should be used, but EPA Method 218.6 does not similarly specify. Accuracy of 50-150% is recommended.

    Response: *The level of accuracy required for laboratories using EPA Method 218.6, which is incorporated into the regulation text by reference, is specified in section 9.3.3 of the method: plus or minus three standard deviations from the percent mean recovery (after a minimum of 20 to 30 analyses). As the level of accuracy for EPA Method 218.6 is already specified in the method text, the State Water Board is not changing proposed regulation text to include the commenter's recommendation.*

    Commenter: 13.

3. Commenter states that monitoring/testing costs are an important consideration. Commenter requests that testing for non-detecting PWS is waived to every 5 to 7 years, or at most, to be included with the 3-year general mineral, physical, and inorganic (gmpio) requirements.

    Response: *Monitoring waivers are available for hexavalent chromium (as for any inorganic chemical) that reduces sampling to once every nine years. To qualify for reduced monitoring, a source must conduct at least three rounds of sampling (a total of nine years for groundwater or three years for surface water) that all show results below the MCL. In short, yes, hexavalent chromium has the same*

monitoring requirements as other inorganic chemicals pursuant to 22 CCR 64432. The proposed regulation text was not changed; the existing regulations (22 CCR 64432(m)) accommodate the request. Please see ISOR section 4.4.1 for the State Water Board's consideration and discussion of monitoring costs associated with the proposed regulation.

Commenter: 68.

4. Commenter notes that it is now possible to detect hexavalent chromium in water down to parts per trillion.

   Response: *Some methods and laboratories are capable of detecting hexavalent chromium down to levels in the parts per trillion. However, this level of detection would likely require additional resources (e.g., specialized equipment), which would be expected to substantially increase costs for many laboratories. Detecting hexavalent chromium down to parts per trillion level was determined to not be necessary for an MCL in the parts per billion (the proposed DLR of 0.1 µg/L is already two magnitudes lower than the MCL of 10 µg/L).*

   Commenter: 37.

5. Commenter is concerned that laboratories will be required to pay higher lab fees and probably ship samples to out-of-county labs.

   Response: *While some laboratory fees may increase and some samples may need to be shipped to other laboratories, surveys indicate that the majority of laboratories can meet the DLR with only small cost increases (ISOR section 10.1).*

   Commenter: 33.

6. Regarding POU/POE testing and certification, commenter notes the gap between the proposed MCL (10 µg/L) and the level to which National Sanitation Foundation/American National Standards Institute, Standard 58 (NSF/ANSI 58) certifies devices (100 µg/L). Commenter highlights the roles of third-party certification and national standards and asserts that certification to national standards (100 µg/L) is a necessity.

   Response: *The State Water Board relies on third-party certification (including NSF/ANSI) for its Residential Water Treatment Devices Registration Program. While NSF/ANSI 58 criteria is based on federal standards, the percent reduction achieved by the device is also included with the certification, allowing calculation of removal levels achieved by each device. In addition, certification to the proposed MCL may become available in the future.*

   Commenter: 28.

J. Standardized Regulatory Impact Assessment (SRIA)

1. Commenters state that the proposed regulation package underestimates or inadequately assesses the cost of compliance, or the estimated costs are not accurate. Some commenters specifically point to the following: not accurately

estimating the number of impacted sources or the costs associated with the elimination of hazardous waste, not adjusting for prospective costs in 2024, and not including land acquisition and building construction costs, additional operation and management costs, land requirements, building requirements, brine/backwash water disposal, sewer discharge for backwash water, additional piping, new electric service, site development, security costs, and/or appropriate installation costs. Some commenters specifically ask if and where capital costs were included in the cost estimates.

Response: *Many of the costs referenced by commenters were included in the cost estimates, including capital costs, hazardous waste disposal, building construction costs, operational costs, managerial costs, brine/backwash disposal, additional piping, and installation (ISOR Attachment 2 (SRIA) section I.3.a.2). It is not practical to include every unique and site-specific element to drinking water operations that a PWS may encounter as part of their compliance action. As a result, land acquisition costs, security costs, and any other site-specific (non-general) costs were not included. Capital costs can be found in ISOR Attachment 2 (SRIA) section I.3.a.2 and Tables A1, A2, A3, A4, and A5. Please also see Response J-34 regarding regulation dataset age.*

Commenters: 4, 5, 11, 12, 16, 21, 22, 26, 27, 30, 34, 35.

2. Commenters note that the cost estimates in the proposed regulation do not match the cost estimates for their PWS.

   Response: *The State Water Board used certain assumptions that may not necessarily be applicable to individual PWS or particular groups of PWS. Because some site-specific factors were not included in this rulemaking, some PWS may incur costs exceeding those provided in the ISOR, while others may incur less costs utilizing other options for compliance. The costs are not intended to be utilized for PWS to budget or bid costs for treatment.*

   Commenters: 11, 27, 44.

3. Commenters states the assumption in the cost estimates that hexavalent chromium would be treated to 80% of the MCL (or 8 µg/L) for the proposed MCL is negligent considering the concentration goal for treatment should be at least 50%. Treating to 80% of the MCL does not leave room for safeguards or exceedances.

   Response: *The State Water Board disagrees with the assertion that the concentration goal should be 50% of the proposed MCL or lower for implementation of treatment. While the State Water Board appreciates that some PWS may take such a conservative approach, 80% serves as a typical operational safety margin for the performance of the treatment plant and is consistent with the approach used in the federal Arsenic Rule and federal Stage 2 Disinfectants and Disinfection By-Products Rule. This assumption was included in the ISOR published on 16 June 2023, the Administrative Draft published in 2022, and the Preliminary Treatment Costs Methodology and Assumptions published in 2020. Notwithstanding the above, the proposed regulation does not require treatment to concentrations below 10 µg/L.*

Commenter: 11.

4. Commenter states that there are significant economic and environmental advantages of *in situ* generated stannous reagent over conventional ion exchange treatment systems and that costs could be reduced by 25-33% of the costs quoted for ion exchange treatment. Commenter asserts that estimates given by other commenters ($80-100 million for the City of Indio and $18 million for the City of Dixon) were produced several years ago and are now obsolete given the proven innovations in hexavalent chromium removal, specifically the *in situ* generation of a stannous reagent, which has been demonstrated to reduce hexavalent chromium treatment costs significantly. Commenter states that these entities should update their treatment pricing to more accurately reflect a reduced cost burden on ratepayers.

   Response: *The information is appreciated.*

   Commenter: 3.

5. Commenters variously claim that the State Water Board failed to consider cost savings from consolidations, alternative water supplies, and/or existing treatment for other contaminants that could be modified to treat hexavalent chromium as well.

   Response: *The purpose of the State Water Board determining estimated average treatment costs was to provide values useful in determining the extent to which an MCL is economically feasible as required by statute. HSC 116365(b)(3) requires that economic feasibility be considered using BAT treatment costs (rather than potentially less expensive alternative means of compliance). The values presented in the ISOR and its attachments are estimates based on the costs of a particular BAT, as mandated by statute. Because cost estimates for non-treatment compliance options can neither be considered as the basis of economic feasibility nor projected with a reasonable degree of confidence due to the lack of site-specific data, cost estimates for these alternatives have not been prepared. In addition, the State Water Board prepared and added to the Documents Relied Upon a Consolidation and Alternatives Analysis, which was made available for public comment on 31 January 2024. While cost savings could result from using existing treatment for other contaminants and modifying that treatment to also remove hexavalent chromium, those modifications would be site-specific and based on the specific water quality and current treatment process at each PWS. Such modifications could cost very little or require additional and possibly expensive capital equipment, and there was not enough information to incorporate these cost savings into the analysis.*

   Commenter: 15.

6. Commenters state that the State Water Board failed to account for multiple regulated contaminant removal when deploying the BATs. All three BATs are capable of simultaneously removing many other contaminants. Accounting for this treatment would reduce the cost of compliance and support a lower MCL (one commenter asserts that it would support an MCL of 1 µg/L).

Response: *The co-removal of multiple regulated contaminants using the proposed hexavalent chromium BATs was considered qualitatively as a benefit of the proposed MCL (discussed in ISOR section 5.2.1). However, the calculation of the resulting cost savings is beyond the scope of this regulation and not currently possible with available data. Please also see Response E-17 regarding further quantifying/monetizing benefits and the effect it would have on the economic feasibility analysis.*

Commenters: 15, 37.

7. Commenters ask if, in light of the errors identified in the ISOR Errata Sheet, the State Water Board needs to reevaluate any of its cost numbers before proceeding with the regulation.

   Response: *The errors identified in the Errata Sheet corrected a transcription error in which monthly values were labelled as annual values in the ISOR. The cost estimates have been reviewed and no changes are needed.*

   Commenter: 21.

8. Commenter requests that the SRIA be revised to account for the real costs and adjust for 2023 values because their costs were more than double those estimated in the SRIA.

   Response: *The State Water Board used certain assumptions that may not necessarily be applicable to individual PWS or particular groups of PWS. Some PWS may incur costs exceeding those provided in the ISOR, while others may incur less costs utilizing other options for compliance. The costs are not intended to be utilized for PWS to budget or bid costs for treatment. The initial SRIA has been reviewed by DOF, and DOF's comments were incorporated into the revised SRIA (ISOR Attachment 2). Similar to the ISOR explanation regarding monitoring data (ISOR, p. 10, footnote 4), as a practical matter, it is necessary to conduct analyses and prepare estimates using static rather than dynamic data sets and dates. In this setting, cost estimation cannot be a dynamic process, where the most recent data can be used to continually update estimates. Due to the extensive pre-rulemaking and rulemaking requirements, especially those associated with major regulations (SRIA development and review), any regulation dataset is likely to be years old at the time of regulation adoption. As such, revisions to the SRIA suggested by the commenters were not performed.*

   Commenter: 5.

9. Commenters request an explanation as to why RCF was assumed as the predominant compliance choice for the purpose of estimating costs when: ion exchange appears to be more prevalent in existing PWS treatment applications; ion exchange seems to be more appropriate for smaller PWS; residuals management issues may significantly limit the viability of RCF in settings remote from sanitary sewer system access; and the choice to primarily use RCF (rather than ion exchange) is a reversal from the 2022 draft costs. Some commenters state that RCF

treatment constraints were not considered in the same way that the ISOR considered the effects of high sulfate concentrations on the feasibility of ion exchange. Others state that ion exchange is more effective at removing multiple contaminants and so should have been used instead. One commenter asserts that DDW must evaluate whether RCF is compatible with source water conditions and existing treatment systems and substantiate the claim that RCF would actually be used by PWS for 98% of sources.

Response: *As explained in the CEM contained in ISOR Attachment 2 (SRIA) section I, estimated costs for both ion exchange and RCF were calculated, and the least costly option was chosen on a source-by-source basis, which was RCF for the majority of sources. While ion exchange may be more prevalent now, that does not necessarily indicate that it will continue to be the most prevalent treatment technology in the future, especially with the development of RCF technology (including the application of stannous chloride as a reagent) over the last decade (ISOR section 10.2, BAT peer review request). It does not appear that ion exchange would be appreciably more appropriate for smaller PWS compared to RCF. RCF technology is commercially available for source flows down to 1 gpm (Aqua Metrology Systems, 2022). In addition, peer reviewers disagreed with the existing BAT limitation that RCF was not appropriate for "very small" PWS. The RCF cost estimates and data used assumed direct access to a sanitary sewer system for discharge was unavailable. Residuals management was included in the RCF cost estimates. The changes made after the 2022 draft costs were based on comments received regarding those costs, resulting in the addition of RCF cost estimates and the selection of the least costly option for each source. Treatment constraints were considered for all proposed BAT, including RCF. Only pH was found to have an effect on RCF treatment, slightly reducing the efficiency of ferric-based reductants; the effect is mild, as the reduction phase can take a few more minutes because of pH. Comparatively, the effect of high sulfate concentrations on ion exchange treatment is significant. Because other reductants are available (such as stannous-based reductants) and because the effect was mild, the cost estimates were not altered to account for this. The State Water Board is not aware of any other constraints (through research or public comments). While ion exchange can effectively remove other contaminants, and PWS may elect to implement ion exchange or other treatment technologies for enhanced contaminant removal beyond regulatory requirements, the additional treatment costs incurred for that additional removal (e.g., additional resin or more frequent resin regeneration or replacement) are not necessary to achieve compliance with the proposed regulation, are outside the scope of the proposed regulation, and are therefore not included. However, the site-specific preference to treat multiple contaminants with one form of treatment is not a requirement. While the fiscal and economic impacts were estimated using the least costly BAT and based on the methodology and assumptions set forth in ISOR Attachment 2 (SRIA), and RCF was calculated to be the to be the lowest cost BAT for approximately 98 percent of sources, no claim that RCF would be used by 98 percent of sources was made. Because*

RCF appears to be less costly than ion exchange, it is likely that it will be widely applied.

Commenters: 2, 4, 13, 16, 26, 73.

10. Commenters state the estimated costs to small PWS are underestimated and/or unreasonably high. One commenter asserts that the State Water Board's CEM purposefully skewed the cost analysis to understate the cost of compliance for small PWS.

    Response: *The State Water Board considered cost impacts of the proposed regulation on disadvantaged and small communities throughout the state (see ISOR section 11). However, treatment costs will vary depending on many site-specific parameters (ISOR section 4.4.2), and the estimated costs are not intended to represent the actual cost to a particular water system (ISOR section 5). The assumptions detailed in ISOR Attachment 2 (SRIA and CEM) section I.3 were appropriate for the fiscal and economic impact analysis required under 1 CCR 2002 and 2003 and the economic feasibility analysis required under HSC 116365. The State Water Board did not skew the CEM to underestimate the cost of compliance for small PWS.*

    Commenters: 16, 23, 34, 58.

11. Commenters note that instead of averaging across the state, narrowing that average to households affected in PWS by the proposed MCL would more accurately reflect the burdens that disadvantaged communities will bear as a direct result of the proposed MCL.

    Response: *Many cost metrics (including averages) were calculated and shared in the proposed regulation documents. In addition to statewide averages, the average costs to households in affected PWS were also presented in ISOR sections 11.2.1 and 11.3 and ISOR Attachment 2 (SRIA) section C.5. The DAC status of each affected PWS was also reviewed in ISOR section 11.3. Please also see Response E-4 regarding including a state-wide cost average in the ISOR.*

    Commenter: 27.

12. Commenters request that the costs be re-evaluated to include underlying issues (such as ongoing issues with other contaminants, stranded costs, lack of alternate sources, recent infrastructure investments, cost burden on ratepayers) that make treatment more expensive for PWS and include these in a holistic view that is more appropriately inclusive of disadvantaged communities.

    Response: *Except for cost burden, the underlying issues referred to by the commenter all appear to be site-specific and were not considered due to a lack of data. Additionally, ongoing issues with other contaminants could not be included because the baseline should be one that reflects the anticipated behavior of individuals and businesses in the absence of the proposed regulation (as required by the State Administrative Manual section 6600). Cost estimates to support fiscal and economic impact analyses must exclude costs of compliance with existing regulations. However, available PWS financial data*

(SWRBC, 2021a), including cost burdens and recent water rates, were considered in the economic feasibility analysis. As required by statute, the economic feasibility analysis was based on the costs of the proposed regulation using BAT (HSC 116365), not other costs or considerations. Consequently, the cost estimates have not been changed.

Commenter: 27.

13. Commenter points out that costs for monitoring and treating hexavalent chromium have reduced significantly over the years and that hexavalent chromium does not cost more to treat than iron and manganese do (and these contaminants are only secondary standards, not primary standards).

    Response: *The State Water Board concurs that analytical costs appear to have decreased over the last decade. While it is possible that treatment costs have decreased from what was presented in the proposed regulation, research and outreach efforts have not availed more recent and robust cost estimates. However, it is true that the same type of treatment proposed as BAT for hexavalent chromium (RCF) is also used to treat iron and manganese for secondary standards.*

    Commenter: 37.

14. Commenters state that data were used selectively, outdated, sparse, weighted, and/or mischaracterized, which likely led to a significant underestimate of costs. One commenter states that the data are not substantial enough because "according to the revised SRIA, the proposed regulation would require sources to have a negative test result a minimum of annually for surface water sources and every three years for groundwater sources (p.12) to establish compliance with the MCL," and that there is a lack of recent data that meet this requirement.

    Response: *Occurrence was calculated conservatively using the highest annual average hexavalent chromium concentration (over more than a decade) to determine which sources would likely need to implement compliance measures and how much that treatment would cost (higher hexavalent chromium concentrations produced higher costs). The applicable cost data were then directly applied to these sources (see in ISOR Attachment 2 (SRIA) section I and the Python code (ISOR Attachment 2 (SRIA) sections I.3.a.2 and I.3.c.2; the code can be accessed at the Hexavalent Chromium MCL GitHub Repository: https://github.com/CAWaterBoardDataCenter/Hexavalent-Chromium-MCL) for a full description of costs and each step of how they were applied). Further, section A.2 of the SRIA (ISOR Attachment 2) explained why known hexavalent chromium concentrations in drinking water sources were relied on, including because 95.4% of groundwater sources and 93.7% of surface water sources have already tested for hexavalent chromium. The "negative" test results referred to by a commenter are not part of the proposed regulation. Rather, a test result can be "non-detect" (indicating that the result was lower than the DLR) or a positive concentration value.*

    Commenters: 2, 33.

15. Commenter notes distributional differences in cost-effectiveness ratios, annual cost per theoretical cancer case avoided per affected service connection, and median monthly household cost increases. Commenter then states that nothing in the revised SRIA indicates that those distributional differences have been accounted for.

    Response: *The distributional differences noted by the commenter measure the lack of economies of scale experienced by small PWS. As discussed in the last paragraph of ISOR section 4.4.4.6, small PWS do not benefit from economies of scale (in other words, system-size-specific cost-effectiveness ratios are very different for large and small PWS).*

    Commenter: 2.

16. Commenter states that systems are more likely to adopt a system-wide treatment technology to meet compliance obligations rather than install treatment at individual sources. Commenter asks for clarity regarding the State Water Board's calculation of costs that assume systems would install treatment technologies at the source as opposed to system-wide treatment systems.

    Response: *As stated in ISOR Attachment 2 (SRIA) section I.2: "California requires PWS to sample their drinking water sources and have the samples analyzed for inorganic chemicals to determine compliance with MCLs, also referred to as drinking water standards. The PWS must 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, which may include taking the source out of use, blending it with another source, or treating the water." Some PWS may find that centralized treatment is preferable to individual source treatment; however, PWS's ability to install centralized treatment instead of treating individual sources is specific to each PWS, and so, to be conservative, the assumption was made that each source would have its own treatment plant (ISOR Attachment 2 (SRIA) section I.3.b). As stated in ISOR section 4.4.2: "The State Water Board did not include adjustments for local economies, site-specific conditions, or other unique costs or savings that may impact some PWS."*

    Commenter: 2.

17. Commenter claims that not calculating the monetary value of avoided cancer cases is a violation of the California Safe Drinking Water Act.

    Response: *The California Safe Drinking Water Act does not require calculating the monetary value of avoided cancer cases. The Act requires the State Water Board to adopt a primary drinking water standard at a level that is as close as feasible to the corresponding PHG placing primary emphasis on the protection of public health. Please see Response E-27 regarding conducting a cost-benefit analysis.*

    Commenter: 15.

18. Commenter would like the costs to be based on actual experience of water supply agencies which have designed and tested these systems.

Response: *The State Water Board encourages PWS to share available cost data with DDW for consideration in regulation development. However, PWS are not required to share this information and, historically, such data have been difficult to acquire. The State Water Board reached out to PWS for cost information and treatment details and followed up with PWS that volunteered information following pre-rulemaking activities. The cost estimates developed for the proposed regulation were compared to available costs from PWS. Several cost estimates volunteered by PWS included activities outside the scope of that required to comply with the proposed regulation.*

Commenter: 5.

19. Commenters claim that the Errata Sheet changed the estimated monthly costs for households, or acknowledges where cost estimates were understated.

    Response: *The Errata sheet did not update/change monthly costs for households. Rather, the Errata sheet corrected a transcription error in which one set of data (the estimated financial support costs) was entered into the text as monthly data, but labelled as annual data. No values were changed in ISOR Attachment 1.*

    Commenters: 30, 34.

20. Commenter hopes to see more analysis on whether RCF is cost feasible compared to ion exchange.

    Response: *In the months since the proposed rulemaking has begun, RCF continues to be a viable treatment option for PWS. Multiple PWS are now planning to implement RCF to treat hexavalent chromium. As shown in ISOR section 4.3.2, RCF is considered feasible and competitive with ion exchange, so no further analysis was conducted for this rulemaking.*

    Commenter: 34.

21. Commenter states that cost estimates were “absolutely conservative.” The commenter also states that most PWS are not going to use centralized treatment, but will instead use consolidation, drilling a new well, or purchasing water to comply with the MCL. Commenter asserts that the State Water Board’s analysis has used the highest possible estimate, and then claimed a lower MCL is unaffordable. Commenters assert that better assumptions could have been developed to derive more accurate cost estimates (e.g., which PWS are within 3 miles of safe water, which sources are near other sources).

    Response: *The State Water Board is required (by HSC 116365(b)(3)) to use the cost of compliance using BATs to determine economic feasibility. Nevertheless, in response to this comment, a Consolidation and Alternatives Analysis (SWRCB, 2024) was prepared, added to the Documents Relied Upon, and made available for public comment. The Analysis shows consolidation potential for up to 36% of PWS and blending potential for up to 43% of PWS.*

    Commenters: 49, 70.

22. Commenters point out that the state's compliance costs for the 2014 proposed MCL were much higher for small PWS than the current cost estimates. Accounting for inflation, annual costs should be more than $7,300 per household per year for small PWS. In contrast, the proposed regulation indicates average annual costs of $1,622 per household for the smallest PWS.

    Response: *The proposed regulation was developed anew rather than building on the 2014 regulation and was able to benefit from more recent data and updated costs for small water systems.*

    Commenter: 16.

23. Commenters request that the State Water Board shows its work as to the data, the manipulation of the data, the interpretation of the data, and how that affected the formation of a regulation.

    Response: *The Cost Estimating Methodology in ISOR Attachment 2 (SRIA) section I details the data, assumptions, and methodology used to develop costs for the proposed regulation. In addition, each step showing how data were transformed and used for the proposed regulation is shown in the* Python code *(ISOR Attachment 2 (SRIA) sections I.3.a.2 and I.3.c.2; the code can be accessed at the Hexavalent Chromium MCL GitHub Repository: https://github.com/CAWaterBoardDataCenter/Hexavalent-Chromium-MCL).*

    Commenter: 33.

24. Commenter notes that the State Water Board has significant resources from the Drinking Water State Revolving Fund, the Infrastructure Investment and Jobs Act, and the 2021-22 California budget that could cover capital costs of projects. Further, commenter states that the SAFER program can provide "direct operations and maintenance" to PWS serving disadvantaged communities with unaffordable water due to treatment costs, but that despite these resources, the Board ignored this available funding when calculating the cost of compliance. Commenters assert that the SRIA only showing costs for the state as a whole is a violation of the Safe Water Drinking Act (which requires looking at the costs borne by PWS, customers, and other affected parties). Commenter requests that the Board's analysis consider that capital costs could be covered by the state.

    Response: *Please see Response E-9 pertaining to economic feasibility and Response F-2 regarding funding. As such, accounting for additional financial assistance resources would not alter either the fiscal and economic impact analysis or the economic feasibility analysis and was, therefore, not performed. While statewide costs were the focus of the SRIA (ISOR Attachment 2), disaggregated costs were detailed in the ISOR: sections 11.2.1 (Monthly Household Compliance Costs Analysis), 11.3 (Systems Challenged to Meet the Proposed MCL), 11.4 (Unit Costs Variability), 11.6 (Economic Feasibility for NTNCWS), 11.7 (Economic Feasibility for TNCWS), and smaller parts of other sections discuss estimated costs borne by PWS and individuals.*

    Commenter: 15.

25. Commenter noted that the affected sources in Dr. Robinson's 2 August 2023 APA Hearing Presentation summed to 494, which is a change from the 501 sources in the ISOR.

    Response: *The seven affected transient non-community water system (TNCWS) sources were excluded from the Hearing Presentation for brevity. Those seven sources plus the 494 sources in the presentation brings the total to 501 sources, which matches the values in the ISOR.*

    Commenter: 73.

26. Commenters state that MCLs are automatically incorporated by reference into basin plans [water quality control plans] as enforceable water quality objectives, which may require additional treatment for wastewater treatment facilities. Commenters request that "analysis of the immediate monitoring and treatment cost impacts to wastewater treatment plans that will directly result from the State Water Board's adoption of the MCL" be evaluated and included in the FSOR for the proposed regulation, as well as in the ISOR for future regulations, particularly to come into compliance with HSC 116365(b)(3). One commenter points out that the aquatic life beneficial use limit is 11 µg/L (U.S. EPA California Toxics Rule freshwater criterion continuous concentration; applicable to discharges under the National Pollutant Discharge Elimination Program (NPDES)), so the proposed MCL would require them to treat 1 µg/L lower than presently proposed, and the marginal change from 11 µg/L to 10 µg/L can still be impactful for those that need to immediately (without the benefit of a compliance schedule) implement treatment upgrades.

    Response: *As was acknowledged by the representative of the California Association of Sanitation Agencies, for the adoption of the hexavalent chromium MCL, there will not be any impacts to the wastewater treatment plants from implementation of the proposed MCL (see transcript of 17 April 2024 Board meeting, p.122, lines 15-18). As was set forth in the Draft Responsive Summary for Comments, the State Water Board is unaware of any wastewater agencies treating specifically for hexavalent chromium, any identified best practicable treatment and control practices for hexavalent chromium removal from domestic sewage upon which to base cost estimates, or whether treatment by a publicly-owned treatment works (POTW) would be the dominant means of compliance. Based on a search of discharge monitoring records, the State Water Board is also unaware of any wastewater agency that would be affected by a hexavalent chromium limit of 10 ug/L and discharging to a receiving water with a beneficial use of municipal and domestic supply.*

    No additional monitoring costs would necessarily be incurred by or could be reliably estimated for wastewater agencies because (1) hexavalent chromium is already a regulated contaminant for dischargers subject to NPDES regulations, (2) RWQCBs do not consistently or automatically require monitoring for contaminants with new or revised drinking water standards, (3) domestic wastewater discharges to land are not typically monitored for metals for soil chemistry (e.g., cation exchange capacity) reasons, and (4) monitoring frequencies are variable from permit to permit and subject to the professional

judgment of the individual permit writer and the discretion of the issuing RWQCB.

No wastewater agency would have to comply with a discharge requirement based on the proposed MCL until a new permit is adopted that incorporates an effluent limitation based on the proposed MCL. In addition, an MCL that becomes a water quality objective is not necessarily incorporated directly into an NPDES permit or waste discharge requirements as an end-of-pipe effluent limitation. For discharges to receiving waters with a beneficial use of municipal and domestic supply, a reasonable potential analysis considering discharge and receiving water data would first be conducted to determine whether an effluent limitation for hexavalent chromium was necessary to protect that beneficial use. If an effluent limitation was determined to be necessary, the RWQCBs would then use their discretion in setting effluent limits based on several variables (monitoring frequencies, monitoring timeframes/data set relied on, and interpretation and application of narrative toxicity objectives), and could also consider mixing zones, dilution credits, and assimilative capacity of the receiving water, and compliance schedules. The timing of any applied limitations would also depend on the permitting cycle, as NPDES permits may not be issued for a term longer than five years, and any renewal delay by the permitting authority results in continuance of the terms of the old permit.

Unlike PWS who comply directly with state regulations, with operating permits providing only additional, site-specific terms, wastewater dischargers are bound to comply with the terms of their NPDES permits. Rather than being directly and immediately affected by new regulations, wastewater agencies discharging under the terms of an NPDES permit are not liable for new or newly interpreted water quality objectives until those new requirements are imposed via permit. Provided the discharger is in compliance with its permit terms and not operating or discharging in a manner materially different from that described in the report of waste discharge and permit, they are not subject to further enforcement, either from the permitting authority or via citizen suit. That, in combination with the timelines presented in the NPDES compliance schedule policy at https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0025.pdf, means that a discharger could theoretically have as long as 15 years before being subject to any punitive enforcement action as a result of the proposed MCL. Presently, California has a nearly 30% backlog rate on its individual permits, which would potentially result in further delays in final compliance dates.

Additionally, once drinking water systems begin treating or employing other compliance measures for hexavalent chromium, the public water supply would have concentrations at or below the proposed MCL, thereby reducing wastewater influent concentrations and any potential costs associated with treatment or other compliance measures.

With respect to the timing of any potential cost impacts, no cost impacts related to treatment would be incurred unless and until (1) waste discharge requirement revisions result in a new or revised discharge limitation based on the proposed

MCL and (2) the discharger determines that treatment (rather than source control or other measures) is the most cost-effective means of compliance.

Any such cost impacts as those requested would be purely speculative and have, therefore, not been added to the analysis.

Commenters: 6, 9, 71.

27. Commenter state that the statement by the State Water Board that incorporation of MCLs into basin plans is "discretionary" is misleading because it suggests that any MCL adopted would be subject to additional review before incorporation into a basin plan. However, Commenter asserts that current basin plan language provides for the automatic incorporation by reference of all MCLs. Therefore, commenter asserts that consideration of the MCL should include an acknowledgement and require analysis of the immediate monitoring and treatment cost impacts to wastewater treatment plants that will directly result from the adoption of the MCL.

    Response: *As was established in the record and acknowledged at the adoption hearing, no cost impacts to wastewater agencies are expected from the proposed MCL. In future proceedings, based on the particular facts considered in that case because each one is fact-bound, and it could drive a different analysis, it could be that economic impacts to POTWs would need to be considered in the ISOR.*

    Contrary to the Commenter's assertion, all MCLs are not automatically incorporated by reference. As an example, the Central Valley RWQCB's Water Quality Control Plan (Basin Plan) for the Sacramento River Basin and the San Joaquin River Basin omits California's Escherichia coli (E. coli) MCL (22 CCR 64426.1, 2021) and trihalomethane MCLs, including those for total trihalomethanes, haloacetic acids (five), bromate, and chlorite (22 CCR 64533, 2006). In other words, that RWQCB exercised its discretion and elected not to incorporate those MCLs by reference.

    Commenter: 9.

28. Commenter points to Water Code 13241, which requires RWQCBs to ensure reasonable protection of beneficial uses and requires consideration of specific factors (listed in Water Code 13241). Commenter claims this analysis is not discretionary and urges the State Water Board (not necessarily DDW) to complete this analysis before adoption of the proposed MCL. One commenter specifies that only costs to wastewater agencies for the regions that incorporate MCLs by reference should be included since a separate discretionary process will be used (Water Code 13241) when MCLs are not incorporated by reference (such as for Region 8).

    Response: *The State Water Board has adopted the proposed MCL pursuant to its authorities and responsibilities under the California Safe Drinking Water Act, not the Porter-Cologne Water Quality Control Act. As a result, the analysis required for the MCL derives from the California Safe Drinking Water Act, and the State Water Board is not required to consider the factors specified in Water Code 13241, even though some regional water boards' basin plans*

incorporate by reference primary drinking water standards as water quality objectives. The State Water Board has not required RWQCBs to incorporate primary drinking water standards by reference as water quality objectives and has approved regional basin plans with varying degrees of MCL incorporation, including at least one basin plan with no prospective incorporation by reference. Further, consideration of Water Code 13241 factors was the responsibility of the regional water boards when they incorporated the MCLs as water quality objectives to reasonably protect waters designated with the beneficial use of municipal and domestic supply.

As was explained by the State Water Board's Chief Counsel at the adoption hearing, when regional boards have chosen to incorporate MCLs as water quality objectives into the water quality control plans, there would not be additional analysis of the factors set forth in Water Code 13241 when issuing NPDES permits under the Clean Water Act (see transcript of 17 April 2024 State Water Board meeting, p.41, lines 8-19). However, issuance of a permit with an effluent limit for hexavalent chromium set at the MCL is not automatic. First, before renewing a permit, the regional boards would have to consider whether it would be necessary to include an effluent limit for hexavalent chromium to protect the receiving water, and calculate the appropriate effluent limit. As was recognized at the adoption hearing, for hexavalent chromium, it is unlikely that an MCL for hexavalent chromium would cause impacts to POTWs, including the need to comply with effluent limits that would require costly upgrades to the POTWs (see transcript of 17 April 2024 Board meeting, p.122, lines 15-18; p.131, lines 3-10). In part, hexavalent chromium is generally not found in surface water above the proposed MCL. For issuance of state-only permits, such as for waste discharges to land, the regional boards would need to consider the requirements set forth in Water Code section 13241.

Please also see Response J-26 for additional information pertaining to wastewater treatment plants.

Commenter: 9.

29. Commenter asserts that the costs and benefits are compared across different timeframes: The 70-year benefit of avoiding 898 cancer cases should be compared to the total cost over 70 years ($12.6 billion), or the theoretical cancer cases avoided over 20 years should be compared to the costs over 20 years (approximately $3.6 billion).

    Response: *The costs and benefits in the SRIA are compared across the same timeframe: one year. Because capital costs were amortized over a 20-year period (to represent the likely scenario in which PWS take out loans to pay for capital costs) and avoided cancer cases were based on a 70-year period (by necessity, as the PHG assumes water consumed over a 70-year lifetime), the cost-effectiveness ratio was calculated using annualized costs and annualized avoided cancer cases (ISOR Attachment 2 (SRIA) section I.3.c.2). However, the cost-effectiveness ratio can be calculated across any comparable timeframes and, because it is a ratio, it will not change. As the commenters suggest,*

calculating the cost-effectiveness ratio for a 70-year period (approximately $12.6 billion divided by 898 avoided cancer cases) and for a 20-year period (approximately $3.6 billion divided by 256 avoided cancer cases) both equal $14 million, the same cost-effectiveness ratio ($14,002,455) for 10 µg/L in Table 38 of the SRIA (ISOR Attachment 2).

Commenter: 2.

30. Commenter claims that the use of averages masks distributional impacts on smaller PWS and different types of PWS. In particular, commenter says the cost-effectiveness ratios are much worse for smaller PWS (including TNCWS) compared to larger PWS, and for PWS that are only a few µg/L above the MCL. Commenter suggests that cost-effectiveness should be considered across PWS sizes and concentration levels. In addition, commenter recommends that the analysis include the number of systems and people served associated with each of the system size categories and reiterates the recommendation that the SRIA include detailed analyses of system types at different MCLs.

    Response: *Averages were used to convey meaningful information in a simple, summarized way, enabling data comparisons, aiding decision making, and facilitating analysis of data trends. Consistent with the APA, the rulemaking documents provide full transparency into the data, methodologies, and other materials relied upon: the SRIA (ISOR Attachment 2), the 85 data and cost tables (including the number of systems and people served associated with each of the system size categories and breakdowns of system types at different MCLs; ISOR Attachment 1), the cost estimates for individual sources (ISOR Attachment 5), and the Python code showing each calculation step were all provided to show costs and impacts in as many ways as possible (ISOR Attachment 2 (SRIA) sections I.3.a.2 and I.3.c.2; the code can be accessed at the Hexavalent Chromium MCL GitHub Repository: https://github.com/CAWaterBoardDataCenter/Hexavalent-Chromium-MCL). In particular, the majority of cost tables are broken down by PWS size, impacts to sub-groups (typical businesses, small businesses, individuals and businesses served by PWS) were discussed separately in the SRIA (sections C.2 through C.5), and the economic feasibility analysis (ISOR section 11) distinctly considers median costs and maximum costs, as well as costs to differently-sized PWS, and listed out costs to individual PWS in section 11.3.*

    Regarding the commenter's example with respect to TNCWS, cost-effectiveness ratios cannot be calculated for TNCWS because TNCWS are only assumed to serve people transiently, so health benefits associated with a chronic health risk are not conservatively calculable, and an attempt to calculate a cost-effectiveness ratio results in division by zero. The cost-effectiveness ratios were calculated across all PWS (using all of the costs and all of the benefits) to account for the fact that some PWS were not assigned a quantifiable health benefit and other costs (like compliance plans, monitoring, etc.) had no quantifiable health benefit. As required in the SRIA, the cost-effectiveness of the regulation was considered as a whole. As discussed in the last paragraph of ISOR section 4.4.4.6, small PWS do not benefit from economies of scale (in

other words, system-size-specific cost-effectiveness ratios are very different for large and small PWS). Complying with the proposed MCL appears less cost-effective for PWS that are only a few µg/L above the MCL compared to PWS with higher hexavalent chromium concentrations because the cost calculations assumed that each source exceeding the proposed MCL would install treatment, regardless of the extent of the exceedance. In practice, sources with small exceedances are more likely to employ strategies such as blending and other alternatives, which are much less expensive (discussed in ISOR section 11.9). Not only is it not possible to break down cost-effectiveness for all PWS types, but it would also have no impact on the outcome of the economic feasibility analysis for the reasons described in Response H-2.

Commenter: 2.

31. Commenter points out that the rulemaking documents remark that the cost-effectiveness ratios are nonlinear but then does not evaluate the causes of that nonlinearity as part of the MCL selection process. In addition, the commenter notes that this does not seem to have affected the choice of MCL.

    Response: *The nonlinearity is the result of nonlinearities in the real-world PWS data (population, PWS size, hexavalent chromium concentration, etc.). In this case, the nonlinearities were caused by different sized PWS (with varying populations and treatment costs) added at discrete concentrations (1 through 15, 20, 25, 30, 35, 40, and 45 µg/L) based on each source's contamination level. When moving from one potential MCL to the next, adding PWS with good economies of scale (usually larger PWS) would cause better cost-effectiveness ratios, and adding PWS without economies of scale (usually smaller PWS) would cause worse cost-effectiveness ratios (ISOR section 4.4.4.6 further discusses economies of scale). The nonlinearities in the cost-effectiveness analysis did not seem to have affected the selection of the proposed MCL because MCLs are not selected based on cost-effectiveness.*

    Commenter: 2.

32. Commenter asserts that DDW failed to evaluate the uncertainties associated with its evaluation of costs and benefits, as required by DOF SRIA regulations.

    Response: *The uncertainties associated with the cost-effectiveness analysis are those associated with the PHG (OEHHA, 2011) and those associated with the cost estimates: as preliminary engineering cost estimates, the associated certainty range is -30 percent to +50 percent (Najm et al., 2014). In response to uncertainties, many conservative assumptions were used (identified throughout the ISOR methodology) to prevent costs from being underestimated. Please see Response D-14 for details regarding how changes to the PHG would affect the economic feasibility analysis. In addition, any extra analysis regarding PHG uncertainty would be speculative.*

    Note: The DOF SRIA regulations at section 2003(e)(3)(D) state that in comparing proposed regulatory alternatives, an agency should consider

including a discussion of uncertainties associated with the estimates used in the cost-effectiveness analysis, not that such a discussion was required.

Commenter: 2.

33. Commenter asserts that the SRIA and ISOR fail to provide sufficient information to allow external stakeholders to fully evaluate and understand the basis for the Division's selection of the proposed MCL, depriving the public of the transparency required by the Government Code and meaningful participation in the rulemaking process. Commenters state that ISOR Attachment 5 does not include the annual theoretical cancer cases avoided for each source or a system number that allows the cases per PWS to be estimated. Commenters also attest that other missing information includes the number of sources affected by PWS, per system costs and benefits, identifiers for public vs private PWS, environmental justice data by PWS, such as information on distribution of income, education, race, and other demographics, and frequency of testing data. Commenter would like these issues addressed in a subsequent, comprehensive revision of the SRIA, the results of which should inform a reconsideration of the proposed MCL.

    Response: *The State Water Board identified in ISOR Attachment 2 (SRIA) the steps and assumptions made in identifying approximately how many PWS would have to take measures to comply with the requirements, the costs for monitoring, and the costs for ongoing centralized treatment for sources exceeding the proposed MCL. Sufficient data, descriptions, and methodology of included analyses were made available to the public via the ISOR, attachments, and identification of Documents Relied Upon (most of which were available on the rulemaking webpage), which provided transparency to the in-depth fiscal and economic analyses. The SRIA was prepared in accordance with Government Code 11346.3, a draft SRIA was provided to DOF prior to publication, and the responses to comments made on the draft SRIA by DOF were provided in the Notice of Proposed Rulemaking and incorporated into the SRIA that was made available for public comment as ISOR Attachment 2. While the system numbers and other details were not provided in ISOR Attachment 5, all PWS information is available in the publicly available data used for this regulation, listed as SWRCB (2021b and 2021c) in the Documents Relied Upon (ISOR section 13). Some of the specific information commenters requested (system numbers, annual theoretical cancer cases avoided per PWS, the number of sources affected per PWS, public versus private PWS designations, costs and benefits per PWS, and frequency of testing data) can be found in or calculated from SWRCB (2021b and 2021c) and/or the CEM (ISOR Attachment 2 (SRIA) section I). Using only ISOR Attachment 5, some information can be back-calculated: the population treated by each source is equal to the source design flow (provided) divided by 1.5 (peaking factor) and then divided by either 150 gallons per capita (gpcd) (for CWS) or 120 gpcd (for other PWS) (see ISOR Attachment 2 (SRIA) section I.3.b). This would also provide a means to calculate theoretical cancer cases avoided for each source. Information requested on environmental justice, the distribution of income, education, race, and other demographics for each PWS can be found in*

SWRCB (2022a), another Document Relied Upon. As such, a comprehensive revision of the SRIA, as suggested by the commenter, was not performed.

Commenter: 2.

K. Changes to Proposed Regulation (First 15-Day Comment Period)

1. Commenters provide background information on themselves, other commenters, and/or the hexavalent chromium regulation.

   Response: *The comment is noted.*

   Commenters: 4, 10, 13, 22, 74, 75, 76, 77, 78, 79, 80, 82, 83.

2. Commenters remark on aspects of the initial regulatory proposal (rather than changes proposed for the first 15-day comment period), including repeating comments made during the initial 45-day comment period.

   Response: *The comment is noted. However, it is beyond the scope of the changes proposed for this (the first 15-day) comment period, and all comments from the initial 45-day comment period have been addressed in sections A through J of this document.*

   Commenters: 4, 10, 13, 22, 74, 75, 77, 81, 83.

3. Commenter would like to see responses to the comments submitted in the initial 45-day comment period.

   Response: *Consistent with Government Code section 11346.9, responses to comments are included in Final Statements of Reasons. As indicated in the Notice of Proposed Rulemaking, "the State Water Board will prepare a final statement of reasons pursuant to Government Code section 11346.9 after final adoption of the regulations". In addition to the responses to comments contained in this Final Statement of Reasons, as a courtesy, a Draft Responsive Summary for Comments was prepared and made available to the public as part of the agenda materials for the 17 April 2024 State Water Board meeting.*

   Commenter: 4.

4. Commenter supports the goal of strengthening consumers' understanding of drinking water quality and therefore strongly urges the State Water Board to invest in accessible resources and communication tools for PWS. The commenter envisions that these tools would assist in educating and informing stakeholders and the public about water notice advisories, fostering a collaborative partnership essential for maintaining trust in their community water system.

   Response: *The commenter's support is noted. The State Water Board will provide templates for Tier 2 public notifications that PWS may choose to use.*

   Commenter: 75.

5. Commenter states that although POU/POE devices would be well-suited to their system, this option is limited to three years, and is therefore difficult, if not impossible, to implement.

Response: *This comment is beyond the scope of the changes proposed during this (the first 15-day) comment period. However, POU/POE use is not limited to three years; the POU/POE permit is limited to three years, after which the system can receive a new permit, if eligible.*

Commenter: 83.

6. Commenters express general opposition to the regulation.

   Response: *Please see Response H-1 pertaining to the State Water Board's mandate to adopt MCLs.*

   Commenters: 10, 74, 81, 83, 84.

7. Commenters assert that the State Water Board's decision to release this 15-day notice the day after OEHHA released its noncancer PHG document suggests that the State Water Board is driving toward a pre-ordained outcome and has no intention of considering new scientific information.

   Response: *The State Water Board finds the proposed MCL to be as close to the PHG as is economically and technologically feasible, and OEHHA's release of a noncancer PHG document does not contradict that finding. Please see Response D-7 for additional information regarding the proposed noncancer HPC for hexavalent chromium.*

   Commenter: 74.

8. Commenter supports the proposed changes but is concerned that compliance costs will impact drinking water affordability for small water system consumers, and therefore urges the State Water Board to provide additional assistance to rural, low-income communities to help them comply. Additionally, commenter discusses economies of scale for PWS, compliance costs, and the necessity of affordable, safe water.

   Response: *The State Water Board appreciates the support. However, the provision of financial assistance is beyond the scope of the proposed regulation. Please also see Response F-11 pertaining to resources for financial assistance.*

   Commenter: 82.

9. Commenter appreciates the State Water Board's urgency to complete the current rulemaking. However, commenter assert that the scientific integrity of the process has been called into question because the MCL is being promulgated before the PHG update has been completed. Commenter states that these actions raise legitimate questions about whether the outcome of the PHG update and the MCL rulemaking process are predetermined. In addition, commenter stresses the importance of OEHHA undertaking a comprehensive, independent, and objective evaluation of the latest health effects in the PHG update and asks that the State Water Board "adjust the MCL rulemaking schedule" to allow OEHHA to fully complete the PHG update and re-evaluate cost-effectiveness.

   Response: *The State Water Board is under a statutory deadline to adopt a primary drinking water standard for hexavalent chromium.*

If the State Water Board were to delay development of the MCL for hexavalent chromium until OEHHA has reviewed the PHG, the delay would be perpetual because OEHHA's review of PHGs is conducted on a recurring basis. The California SDWA requires OEHHA to review each PHG at least once every five years (unless OEHHA determines that there has not been a detection of the corresponding contaminant in the preceding five years), and to revise the PHG as necessary based upon the availability of new scientific data (HSC 116365(e)(1).). If the State Water Board held off on developing primary drinking water standards whenever there was a chance that OEHHA might revise a PHG, the development of primary drinking water standards and implementation of the California SDWA would be undermined. In the case of the primary drinking water standard for hexavalent chromium, the statutory mandate to adopt the standard would be stymied.

OEHHA undertook a data call-in in 2016 that did not result in a change to the PHG. According to OEHHA, its review of the information received from the 2016 data call-in and other supporting information released after 2016 did not produce enough evidence to suggest that completing the PHG update process would yield a significantly different approach to the assessment of hexavalent chromium. Currently, the State Water Board's proposed MCL for hexavalent chromium at 10 µg/L is higher than OEHHA's draft noncancer HPC of 5 µg/L, as shown in its "Proposed Health Protective Concentration for the Noncancer Effects of Hexavalent Chromium in Drinking Water", November 2023. Although the HPC could be adjusted based on further scientific peer review, it is unlikely to exceed the proposed MCL of 10 µg/L. The State Water Board is not aware the PHG is likely to be revised above 10 µg/L. Even if the cancer HPC is set above the noncancer HPC, which would be highly unusual, the PHG will ultimately be the lower of the noncancer and cancer HPCs. OEHHA's current draft non-cancer HPC is 5 µg/L, less than the State Water Board's proposed MCL of 10 µg/L. Wherever the PHG is set, the State Water Board will have further opportunities to consider the MCL. Under the California SDWA, the State Water Board is required to review previously adopted primary drinking water standards every five years and amend them if new scientific evidence that indicates that the substance may present a materially different risk to public health than was previously determined (HSC 116365(g)(2)). Similarly, also under the California SDWA, OEHHA is required to review previously published PHGs every five years for each corresponding contaminant with a detection in the preceding five years. If the PHG for hexavalent chromium is revised in this or other future reviews, the State Water Board can update its MCL for hexavalent chromium.

Commenter: 76.

10. Commenter requests that blending of well and treated surface water be allowed as a method of compliance, and provides details of their blending program to demonstrate feasibility.

Response: *This comment is beyond the scope of the changes proposed during this (the first 15-day) comment period. However, Response A-30 is related and may be helpful.*

Commenter: 12.

11. Commenters appreciate the removal of the compliance date requirement from the Hexavalent Chromium Compliance Plan.

    Response: *The support is appreciated.*

    Commenters: 4, 10, 13, 75, 78, 79, 80.

12. Commenters state that the changes do not go far enough to address insufficient compliance timeframes. Some commenters assert that this change acknowledges that many PWS will not be able to comply by the current compliance dates. Some commenters say that in this case, a better approach would be to establish a longer compliance schedule, suggesting a 3-to-5-year compliance schedule.

    Response: *Circumstances in which some PWS struggle to comply will be assessed on a case-by-case basis with the appropriate Division of Drinking Water District Office. The reasons for not lengthening the compliance schedule are detailed in Response C-2.*

    Commenters: 10, 13, 75, 77, 78, 79, 80.

13. Commenter states that the proposed change is unnecessary, does not provide a benefit to PWS, and does not address commenter's concerns.

    Response: *The proposed change would allow PWS to produce approvable compliance plans even when a PWS does not anticipate meeting their compliance deadline, which is a benefit. The changes to the compliance plan requirement would allow PWS to accurately plan for compliance, even if they do not anticipate being able to meet their compliance deadline. This is necessary to ensure that the compliance plans are achievable. The Tier 2 notifications were added to ensure that equivalent customer notification is provided for MCL exceedances regardless of the PWS's compliance deadline.*

    Commenter: 74.

14. Commenters state that the proposed change is unnecessary because Consumer Confidence Report reporting is already required, and that level of notification is sufficient prior to the compliance deadlines.

    Response: *The purpose of this change is to provide timely and equivalent consumer notifications of MCL exceedances, regardless of compliance deadlines, so that consumers can make informed health decisions. Notification via Consumer Confidence Reports would not meet this purpose because those notifications are only updated and sent once per year. Comparatively, Tier 2 notifications would be sent within 30 days of an exceedance and re-sent each quarter the exceedance occurred. It is therefore preferable that notices be distributed in compliance with Tier 2 requirements. Note: On 15 May 2024, the U.S. EPA announced Consumer Confidence Report Rule Revisions which may*

increase the frequency of Consumer Confidence Report notifications to twice per year for some PWS.

Commenters: 13, 74, 79, 80.

15. Commenters state that Tier 2 reporting should only be used for actual MCL (or other specific) violations and that requiring it before the compliance date misinforms the public and creates the false impression that a condition of non-compliance exists. A commenter also states that a Tier 2 notice would increase potential legal exposure of a PWS when no violation has occurred.

    Response: *Tier 2 notifications are the appropriate level of notification for contaminants involving non-acute health effects, such as those identified for hexavalent chromium.*

    Commenters: 13, 78, 79, 80.

16. Commenters suggest that instead of the proposed change, additional communication could be achieved through adding a communication plan to the required compliance plan (some commenters also say this would allow PWS to implement more effective communication to disadvantaged and other underserved communities).

    Response: *The proposed requirements for Tier 2 notification and Consumer Confidence Reports provide clear and consistent communication to affected consumers statewide. PWS may conduct additional communication with customers.*

    Commenters: 13, 78, 79, 80.

17. Commenters would like the following language added: “a PWS shall not be deemed in violation of the hexavalent chromium MCL while that PWS is implementing an approved compliance plan or while State Water Board action on a timely submitted compliance plan is pending.”

    Response: *Circumstances in which some PWS struggle to comply will be assessed on a case-by-case basis with the appropriate Division of Drinking Water District Office. The suggested language could allow PWS continuously to submit a compliance plan for consideration and thereby put off compliance with the proposed MCL indefinitely; this would not be consistent with the State Water Board’s mandate to protect public health. Therefore, the proposed regulation text was not changed to include the suggested language.*

    Commenters: 13, 78, 79, 80.

L. Material Added to Documents Relied Upon (Second 15-Day Comment Period)

1. Commenters provide background information on themselves, other commenters, and/or the hexavalent chromium regulation.

    Response: *The comment is noted.*

    Commenters: 5, 25, 74, 75, 85, 86, 87, 88.

2. Commenters remark on aspects of the initial regulatory proposal or changes proposed for the first 15-day comment period (rather than changes proposed for the second 15-day comment period), including repeating comments made during previous comment period(s).

   Response: *The comment is noted. However, it is beyond the scope of the changes proposed for this (the second 15-day) comment period.*

   Commenters: 5, 25, 74, 75, 86, 89.

3. Commenters state that DDW should not rely on OEHHA's Non-cancer Public Review Draft to support the proposed MCL regulation. Commenters assert that this reliance is concerning, inappropriate, premature, gives the impression that both agencies are driving toward a predetermined outcome, and/or is another post-hoc rationalization to justify inappropriately expediting the proposed regulation. Commenter also notes that this is a draft, not a final document, and it is subject to both external scientific peer review and further revision to address comments. Commenter requests that the State Water Board withdraw its reliance on this draft.

   Response: *OEHHA's Non-cancer Public Review Draft was published after the Notice of Proposed Rulemaking and was relied upon as supporting information for promulgating the proposed regulation while OEHHA undertakes its review of the PHG. Therefore, the State Water Board is not withdrawing its reliance on this document. Please also see Response K-9.*

   Commenters: 25, 74, 75, 85.

4. Commenter state that the proposed regulation and PHG-update process were manufactured by the State Water Board and OEHHA and conflicts with both the letter and spirit of the California Safe Drinking Water Act.

   Response: *The State Water Board followed all relevant laws and regulations related to the proposed regulation. Please also see Response D-4 regarding the PHG and OEHHA.*

   Commenter: 74.

5. Commenters note that the Second 15-Day Notice does not identify any proposed changes or explain the relevance of the two added Documents Relied Upon, leaving stakeholders to speculate regarding the nature, extent, relevance, and/or purpose of the State Water Board's reliance on the documents. Commenters ask that the use and relevance of the added documents be clarified and/or an explanation of how they relate to the ISOR.

   Response: *OEHHA's Non-cancer Public Review Draft was published after the Notice of Proposed Rulemaking and was relied upon as supporting information for promulgating the proposed regulation while OEHHA undertakes its review of the PHG. The Consolidation and Alternatives Analysis was added to the record to provide the public and State Water Board members with more information about the feasibility of two alternative means of compliance (consolidation and blending) with the proposed regulations and was not used to change the economic feasibility analysis or fiscal and economic impact analysis.*

Commenters: 25, 74, 75, 85.

6. Commenters state that the Consolidation and Alternatives Analysis does not support the conclusion that there are viable alternatives for regulated systems. In particular, one commenter states that DDW has not evaluated the willingness and capabilities of potential receiving systems or the availability and accessibility of funding to cover consolidation costs. Another commenter states that the consolidation analysis would benefit from information about the cost and time for completion (including costs for studies, infrastructure improvements not directly related to piping and appurtenances, and acquisition of water rights and other assets), which could reveal whether the schedule proposed for compliance is realistic or should be lengthened. Another commenter specifies that because the Consolidation and Alternatives Analysis did not consider system-specific factors for blending (such as the location and proximity of sources to each other, costs associated with bringing water to a central blending location, system configuration, and comparative source size or volume) that the analysis does not support the conclusion that blending is a viable alternative.

   Response: *HSC 116365 requires that economic feasibility be based on the costs of using BAT, which does not include consolidation or blending, so expanding this analysis as suggested would not result in a different economic feasibility determination. The Consolidation and Alternatives Analysis was limited to the available source data. As discussed in Response L-5, the Consolidation and Alternatives Analysis was included to provide the public and State Water Board members with more information regarding the potential for consolidation and blending but was not used to develop the proposed MCL. In addition, please also see Response A-33 regarding the availability and viability of alternatives to centralized treatment.*

   Commenters: 74, 75, 85.

7. Commenter would like reporting to be extended to the customers and general public via city and county website portals.

   Response: *Proposed Tier 2 notice requirements include internet posting as an option for reaching customers and consumers who are not customers (22 CCR § 64463.4). There is nothing in the regulations that precludes PWS from engaging in additional public communication efforts. The State Water Board may explore the commenter's suggestion for revisions to the Consumer Confidence Report regulations in a future rulemaking.*

   Commenter: 89.

8. Commenter states there are three documents added.

   Response: *The Notice of Public Availability of Additional Documents Relied Upon, dated 31 January 2024, noticed the addition of two documents to the rulemaking file: (1) "Public Review Draft of a Proposed Health-Protective Concentration for the Noncancer Effects of Hexavalent Chromium in Drinking Water", by OEHHA, 2023; and (2) "Consolidation and Alternatives Analysis" by the State Water Board, 2024. The commenter refers to a third document, namely*

Appendix A to "Draft White Paper Discussion on: Proposed Drinking Water Cost Assessment Model Assumptions on Physical Consolidation", but that is not a document relied upon. Rather, that document is merely a cited reference in the Consolidation and Alternatives Analysis. It was not incorporated by reference and was not relied upon beyond its inclusion as a cited reference in the Consolidation and Alternatives Analysis.

Commenter: 85.

9. Commenter supports the State Water Board's drive to improve public health by lowering hexavalent chromium levels in drinking water, as it is an important topic. Another commenter supports the reporting requirements (Tier 2 public notices) for exceedances before the compliance deadline.

   Response: *The support is appreciated.*

   Commenters: 88, 89.

10. Commenter provides information regarding Modified Activated Carbon (MAC-NP2), which is part of a treatment process that effectively removes both hexavalent and trivalent chromium with no liquid discharge (significantly improving treatment economics). Commenter suggests that MAC-NP2 be considered for inclusion as a BAT for hexavalent chromium. Commenter notes that this technology has been supported by a pilot study resulting in the State Water Board issuing conditional acceptance for treating hexavalent chromium in a process using MAC-NP2 "that can be used by any public water system in California." Commenter states that this technology achieves operational savings because the media is regenerable and the treatment process has zero liquid discharge.

    Response: *The information is appreciated. However, it is beyond the scope of the changes proposed for this (the second 15-day) comment period. Nevertheless, because BATs need to be peer reviewed (which would take more time than is available to complete this rulemaking), it is not possible to include additional BATs in the currently proposed regulation. However, this technology may be added as BAT in a future regulation.*

    Commenter: 88.

11. Commenter states that adding documents to the record this late in the process without proposing changes to the regulation text reinforces the perception that the goal for this rulemaking has always been to reestablish the previous MCL of 10 µg/L regardless of whether available evidence supports that outcome. Commenter reiterates their prior request that this rulemaking be suspended.

    Response: *Due to the interest in the PHG update and consolidation, the additional documents were included but not used to develop the proposed MCL. The State Water Board has decided to proceed with the rulemaking process. Please also see Responses K-9 and L-3.*

    Commenter: 74.

12. Commenter states that older total chromium data should not be allowed to be considered for compliance with the MCL because the confidence levels are far too unreliable for hexavalent chromium.

    Response: *Older total chromium data would not be allowed to be considered for compliance with the proposed hexavalent chromium MCL. To comply with the proposed regulation, only hexavalent chromium data utilizing EPA Method 218.6 or 218.7 may be used to demonstrate compliance with the proposed MCL.*

    Commenter: 86.

13. Commenter states that OEHHA's Draft Noncancer PHG for hexavalent chromium used a rough probability model based on uncertain data and studies. Commenter disputes setting the MCL at 10 ug/L and claims that dose-response data were available in the human epidemiology studies for hexavalent chromium that were provided by OEHHA (even though OEHHA states that there was not dose-response data associated with those studies).

    Response: *OEHHA is an independent entity, and their PHG establishment and revision processes are independent from this proposed rulemaking. DDW considers the PHG values OEHHA establishes but does not weigh in on their formation. The commenter should contact OEHHA with any health-related information.*

    Commenter: 5.

14. Commenter states that the State Water Board should not rely exclusively on consolidation as a primary solution to address hexavalent chromium, even though it is understood to be the State Water Board's preferred solution for addressing most small water system challenges. Commenter states that the analysis shows the limits of consolidation as a means for compliance and has serious concerns about its implementation, especially in light of the time frame provided for the smallest systems (rarely would consolidations be completed within the 2-to-4-year compliance schedule).

    Response: *The State Water Board is not relying exclusively on consolidation as a primary solution to address hexavalent chromium. Per HSC 116365, economic feasibility must be determined using the cost of BAT. The Consolidation and Alternatives Analysis was included to provide the public and Board members with more information.*

    Commenter: 75.

15. In response to the Consolidation and Alternatives Analysis, commenter states that consolidations carry further challenges, including physical cost (which appears to be underestimated), the availability of funds (which has not been fully explored), and implementation time needed (which will require much more time than the years provided for in the compliance schedule).

    Response: *The Consolidation and Alternatives Analysis was limited to the available source data. In addition, statute requires that economic feasibility be based on the costs of BAT (not other alternatives such as consolidation), so*

additional analysis would not alter the economic feasibility analysis. Please also see Response L-6.

Commenter: 75.

16. Commenter would like the State Water Board to address household affordability impacts and economic feasibility for systems since documents added to the record do not sufficiently close the gaps and shortcomings in the ISOR. Commenter would like compliance schedule to be realigned to reflect availability of State resources to provide the necessary assistance, especially since consolidation costs are already not affordable for small systems and the models do not address the impact of consolidation on water rates.

    Response: *Please see Responses A-35 and E-29 regarding the assessment of affordability, Response E-1 regarding aspects of economic feasibility, Response C-2 regarding the compliance schedule and its enforcement, and Response F-11 regarding resources for financial assistance. In addition, per HSC 116365, economic feasibility must be determined using the cost of BAT, not other means of compliance (such as consolidation). The compliance schedule in the proposed regulation was not changed.*

    Commenter: 75.

17. Commenter would like the State Water Board to suspend the proposed regulation pending OEHHA's completion of the PHG update and reconsideration of technological and economic feasibility.

    Response: *The comment is noted. However, it is beyond the scope of the changes proposed for this (the second 15-day) comment period. Please also see Response K-9.*

    Commenter: 74.