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Via Electronic Mail to: commentletters@waterboards.ca.gov

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Subject: Comment Letter – Hexavalent Chromium Workshop

The Central Valley Clean Water Association (CVCWA) and the California Association of Sanitation Agencies (CASA) appreciate the opportunity to participate as stakeholders providing input into the process of adopting a primary maximum contaminant level (MCL) for Hexavalent Chromium. We offer these comments to assist the State Water Board in its analysis. As noted in the notice requesting these comments, this input precedes the formal adoption process for the proposed MCLs.

CVCWA is a non-profit association of public agencies located within the Central Valley region that provide wastewater collection, treatment, and water recycling services to millions of Central Valley residents and businesses. CVCWA members have a strong commitment to the protection of municipal and domestic beneficial uses in Central Valley waters. CASA represents more than 125 public agencies and municipalities that engage in wastewater collection, treatment, recycling, and resource recovery, and its vision is to advance public policy and programs that promote the clean water community’s efforts in achieving environmental sustainability and the protection of public health.

Our associations’ comments focus on three important aspects of MCL development: (1) the economic feasibility analysis prepared to support adoption of the MCL; (2) the automatic incorporation of MCLs into basin plans as enforceable water quality objectives (WQOs); and (3) the unsuitability of the proposed detection limit for purposes of reporting (DLR) and specified analytical methods for wastewater samples.

The Economic Feasibility Analysis Must Adequately Address Impacts to Small Water Systems and Must Be Augmented to Address New Concerns

As described in the Health and Safety Code, the process for setting MCLs is, appropriately, strongly biased toward public health protection. On the other hand, setting an MCL “involves a balancing of public health concerns with questions of technological feasibility and cost.” The draft Economic Feasibility Analysis White Paper prepared by the State Water Board staff noted that the “State Water Board . . . acknowledges the need to consider costs of regulatory compliance with the benefits achieved.”
On May 15, 2020, CVCWA submitted detailed comments on the draft White Paper. Those comments questioned aspects of the methodology used in the economic feasibility analysis and, in particular, the treatment of costs to users of small water systems. The acknowledged challenge is to balance the emphasis on stringent MCLs with the complex realities of both the economic and health impacts of compliance — in particular, at the customer/household level in small systems. As noted in California-based research by Christian-Smith, et al., 2013, it is important to focus on impacts at the household level, since analysis at the statewide level, or even at the water-system level, can obscure the actual impact to customers. As a superior court decision has clarified, the state cannot simply ignore the economic feasibility of the regulation on a small segment of the population that will bear disproportionately higher costs. The court also opined that the state “must pay particular attention to small water systems and their users.”

In this comment letter, CVCWA and CASA continue to request resolution of the issues identified in its May 15, 2020 comment letter.

Additionally, review of the information provided in the Staff Report and the attachment to the staff report (tables) indicates several additional areas of concern regarding the determination of economic feasibility and evaluation of alternative MCL values, as summarized below.

1. In large part, the economic feasibility analysis described in the staff report appears to be based on an incremental, rather than aggregate, method of analysis. That is, the incremental compliance cost of the proposed MCL of 10 ug/l is the focus of the cost estimates and most of the analysis. From a household perspective, the isolated cost to comply with the proposed MCL is not the most important issue. The important issue is the aggregate cost for water supply for households, and whether this cost falls within the affordable range, as defined by USEPA and/or other measures of household economics.

2. The one place where total costs to the customer have apparently been considered is on page 9 of the staff report, where it is stated that a USEPA metric of 2.5 percent of median household income (MHI) was considered in the analysis as a threshold for affordability for water bills. It is noted that a number of small water systems will be expected to see costs that exceed this threshold (for an MHI of $45,000, the threshold for affordability at 2.5 percent is $1,125 total cost). A number of those systems already exceed the USEPA affordability threshold, without consideration of the proposed MCL. This raises several key questions regarding this element of the analysis:

   - **What is the basis for the 2.5 percent metric?** In its 1995 Interim Economic Guidance for Water Quality Standards, USEPA states that communities experiencing costs greater than 2 percent of MHI could be expected to experience large financial burdens on many of their households. Does the Water Board intend to use this metric (2.5 percent of MHI) in future analyses?
• Why is the Water Board using the 2.5 percent of MHI metric to assess affordability of water bills? The USEPA Interim Economic Guidance uses its affordability metric to assess impacts of compliance costs with the Clean Water Act (CWA), i.e. wastewater and stormwater compliance costs to achieve water quality standards. No mention is made in USEPA CWA Economic Guidance regarding compliance costs associated with MCLs or other provisions of the Safe Drinking Water Act. In addition, these costs are additive – the typical household must bear the costs of both wastewater and drinking water.

3. In the staff report and accompanying tables, ranges of potential costs to households are provided, in addition to average values. For small water systems serving less than 100 connections, average annual cost increases per household to address the proposed Cr(VI) MCL are estimated to be $2,440 for centralized treatment solutions and $456 ($38/month x 12 months) for point of use (POU) solutions. Clearly, the costs for centralized treatment would not pass any test of economic feasibility. Depending on the current total household utility bills, the incremental cost of POU systems may also push many households over the threshold for affordability and economic feasibility. If anything approaching the maximum costs per household presented in Table 16A were to occur (e.g. monthly cost increases of $999 to achieve 10 ug/l in some small systems), a finding of economic feasibility would be untenable.

4. As described in the staff report, the economic feasibility analysis is based on a range of possible MCL values from 1 ug/l to 25 ug/l. The existing MCL of 50 ug/l is not considered in the analysis. The information provided in Table 6A (in the attachment to the staff report) for community water systems indicates that the cost difference between 10 ug/l and 20 ug/l is three to four fold, depending on whether the comparison is for total costs or costs for systems with less than 100 connections. At 25 ug/l, the cost difference is six to eight fold. To perform a balanced analysis, the State Water Board should look at the increased risk of excess cancer cases over a 70-year period of exposure. For systems with less than 100 connections, the avoided cancer cases at 10 ug/l versus 25 ug/l is less than two (based on information provided in Table 12A). Given the exorbitant costs of attaining the proposed MCL of 10 ug/l for these small water systems, a re-examination of the MCL applicable to these systems should be performed.

CVCWA and CASA request that the following factors be addressed:¹

• A well-articulated method and structure for the analysis of economic feasibility should be identified and documented. The structure should specify the important issues that have been and will be addressed in this and future MCL evaluations. For instance, the proposed use of USEPA affordability metrics should be clearly stated.

¹ Additional detail on each of these points was provided in CVCWA’s May 15, 2022 letter.
• In addition to the consideration of the health risks associated with Cr(VI) concentrations in drinking water, the economic feasibility portion of the MCL development process should consider the indirect health risks associated with the economic impacts of increased water rates, especially in communities with populations at or near poverty levels. This evaluation should apply to households served by both large and small public water systems. Increases in utility rates affect all households but are especially difficult for low-income households that already struggle to pay for the essential costs of living. A modest increase in a monthly utility bill for electricity, water, or wastewater treatment further taps household resources at lower income levels that are already strained by paying for housing, food, health care, clothing, transportation, existing utility costs, and other essential goods and services.

• The State Water Board should directly address the so-called “small system dilemma”; i.e., the need to balance health protection for users of small systems with the need to have affordable solutions for those small systems. Many small public water systems already struggle with compliance and routine maintenance such that any new or more stringent drinking water standards will be difficult for these systems to comply with. Current water rate levels are difficult for disadvantaged populations to bear, and in many cases these rates barely cover basic operational needs and do not address infrastructure maintenance and replacement.

• As part of this MCL process, the State Water Board must consider the effectiveness and sustainability of small-system treatment solutions and impacts to small communities and small public systems, both disadvantaged and non-disadvantaged. The technical and administrative feasibility of POU systems should be carefully analyzed. The analysis must not mask the impacts on small communities by considering a weighted average annual cost approach or by otherwise ignoring or minimizing actual impacts to small systems and their users. Before relying on grants and loans to ameliorate the significant impact of the proposed MCL on many small-system households, the State Water Board must perform a complete analysis of the capacity of available funding programs to meet the needs of all small systems to entirely offset disproportionate cost burdens on these systems. If grants are integral to resolving affordability problems, the evaluation must address whether grant funding sources are adequate to cover all impacted small systems.

The Very Real Impacts of MCL Adoption on Wastewater Agencies Must Be Acknowledged and Addressed

In most regions in California, MCLs are automatically incorporated by reference into basin plans as enforceable WQOs. As such, revised MCLs raise issues regarding the feasibility and cost of compliance with effluent limitations in NPDES permits and WDRs. To the extent that compliance problems may arise, this can result in additional treatment
requirements and associated cost consequences, which will add to the local burden on utility user charges. It is important that these costs be evaluated and understood, either as part of the MCL development process or a parallel analysis by the state and regional boards.

In establishing WQOs, the California Water Code requires regional water quality control boards to ensure reasonable protection of beneficial uses and requires consideration of the following factors:

a. Past, present, and probable future beneficial uses of water.

b. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

d. Economic considerations.

e. The need for developing housing within the region.

f. The need to develop and use recycled water.

(Wat. Code, § 13241.)

We understand that the Division of Drinking Water may not be the appropriate unit within the Water Boards to perform the Water Code Section 13241 analysis. But, it is the Water Boards’ duty to do so prior to adoption of any new MCL – in this case for Cr(VI). Thus, the Division of Drinking Water’s consideration of the technological and economic feasibility of any MCL for drinking water providers should be accompanied by a parallel analysis by the Division of Water Quality or the Central Valley Regional Board that takes into consideration the requirements of Water Code Section 13241. Further, given the aggregate effect of both water and wastewater rate increases at the household level, we advocate that the “economic considerations” that are made in addressing Water Code Section 13241 requirements be consistent with the approach outlined above to address the economic feasibility of a proposed MCL.

**The DLR and Analytical Methods Specified for the MCL Should be Specifically Reserved for Drinking Water Samples.**

The DLR is 0.05 ppb. While matrix interference is not expected to be significant in drinking water samples, this is not the case in wastewater. In wastewater samples, organic matter poses significant matrix interference for the hexavalent chromium analysis. The IC methods (EPA 218.6 and 218.7) are susceptible to interference by high levels of ions (such as chlorides and sulfates), which can saturate the IC system if they are present in high amounts. These matrix interferences preclude the use of the DLR and will confound analytical results in the analysis of wastewater samples. The staff report should make clear that the use of the DLR and specified analytical methods are limited to drinking water samples.
We thank you again for this opportunity to contribute our input to the Hexavalent Chromium MCL workshop. Please contact either of us if you have any questions regarding the above information.

Sincerely,

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