



August 13, 2018
180237:EC:BS

Jeanine Townsend, Clerk to the Board State Water Resources Control Board
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Sent via email to: Jeanine Townsend, Clerk to the State Water Board at
commentletters@waterboards.ca.gov

Subject: Comment Letter — Salt and Nitrate Control Program Basin Plan Amendment

Dear Ms. Townsend:

The purpose of this letter is to provide comments from the Sacramento River Source Water Protection Program (SRSWPP) on the Basin Plan Amendment (BPA) for a Central Valley-Wide Salt and Nitrate Control Program, which was adopted by the Central Valley Water Board on May 31, 2018. The SRSWPP is sponsored by the Cities of Sacramento and West Sacramento, East Bay Municipal Utility District (EBMUD), and the Sacramento County Department of Water Resources, protecting Sacramento River source water quality for over two million customers. The SRSWPP seeks to maintain the high quality of the Sacramento River drinking water supply for the current and future generations. The comments provided in this letter also relate to protection of the high quality of the American River water supply. It is our responsibility as water utilities to ensure that our water is both healthful and free of any unpleasant taste, odor, or other aesthetic effects. Protecting the quality of the raw water supply is crucial to ensuring that treated water quality not only meets the primary and secondary drinking water standards, as required by the Division of Drinking Water (DDW), but moreover is the best quality that we can reasonably provide to protect public health and welfare.

The SRSWPP has been tracking and participating in the Salt and Nitrate Management Program (SNMP) development since the CEQA Scoping was published in 2013. A number of changes proposed as a result of the SNMP do not relate to Salt and Nitrate Management. We have provided formal and informal written comments, attended and participated in Central Valley Water Board and CV-Salts meetings, and submitted constructive input and suggestions for proposed changes related to non-salinity Secondary Maximum Contaminant Levels (SMCLs). The focus of our comments remains on proposed changes affecting the non-salinity Secondary MCLs. We are concerned that some aspects of the BPA related to Secondary MCLs may result in unintended consequences to the quality of the Sacramento River and American River surface water that we use for our municipal drinking water supplies and reduce the level of protection provided by the Secondary MCLs. We appreciate that Central Valley Water Board staff has worked to address some of our concerns, including coordination with the DDW and affirmation of existing policies.

At this point in the regulatory approval process, we understand that the State Water Resources Control Board (State Board) is soliciting comments for consideration with specific criteria. These

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comments incorporate by reference our past written and oral comments in addition to responding to this public input opportunity. We would like to respectfully note that we believe that some of the Central Valley Water Board responses to our comments did not adequately address our concerns; however, we have elected to focus on four key issues of highest concern in this proceeding. The purpose of this letter is to request that the State Board consider the following clarification and technical issues:

- A. Request for minor, non-substantive corrections to the Basin Plan Amendment language for clarity and consistency.

In accordance with Resolved item 7, page 8, of the May 31, 2018 Central Valley Water Board Resolution R5-2018-0034, the SRSWPP requests the following minor, non-substantive corrections to the Basin Plan Amendment language

- a. Chapter 3, Water Quality Objectives, Minor Clarification on Wording to Specify Applicability to Secondary MCLs: The SRSWPP requested revisions to additional proposed language in Chapter 3, to ensure that the new language is not misunderstood in the future to apply to all MCLs rather than only secondary MCLs as scoped in this BPA. We provided input in May 7 written comments (SRSWPP Comment No. 32) and oral comments at the May 31 Central Valley Water Board public hearing requesting this clarification; therefore, this comment was raised timely before the Central Valley Water Board. The RTC No. 32 indicated a change in the initial language, but did not provide any clarification on why the new statement would continue to apply to all MCLs. At the May 31 meeting, the minor clarification request to add "Secondary" was denied on the basis that the context provided enough meaning and more clarification was not required.

We appreciate that the Central Valley Water Board's RTC documents that the BPA makes no changes to any of the Primary MCLs or the methods used to evaluate compliance with the Primary MCLs. The following is the RTC to the SRSWPP comment 30:

SRSWPP Comment No. 30, RESPONSE: The scope of the proposed Basin Plan amendment has always included the chemical constituents identified as Secondary MCLs. The fact that some of these chemical constituents may also have Primary MCLs is self-evident but irrelevant because the proposed Basin Plan amendment makes no changes to any of the Primary MCLs or the methods used to evaluate compliance with the Primary MCLs."

We would also like to note the paragraph containing our request already uses the term "Secondary MCLs" twice (see grey highlighted text), and the change that we are requesting is therefore needed for clarity and consistency. We request that the State Board consider the following minor clarification to R5-2018-0034, Attachment 1, page 3 as shown in bold:

Modify the Basin Plan in Chapter 3 Water Quality Objectives under the heading, "Water Quality Objectives for Inland Surface Waters, Chemical Constituents" as follows:

Water Quality Objectives For Surface Waters

Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses...

At a minimum, unless there is an approved site specific objective, surface water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations (Title 22), which are incorporated by reference into this plan: Tables 64431- A (Inorganic Chemicals) and 64431-B (Fluoride) of sSection 64431, and Table 64444-A (Organic Chemicals) of sSection 64444, and Tables 64449-A (Secondary Maximum Contaminant levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) and of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain lead in excess of 0.015 mg/l. The Central Valley Water Board ~~Regional Water Board~~ acknowledges that specific treatment requirements are imposed by state and federal drinking water regulations on the consumption of surface waters under specific circumstances. Some Secondary MCLs may not be appropriate as an untreated surface water objective without filtration or consideration of site-specific factors. To protect all beneficial uses the Central Valley Water Board ~~Regional Water Board~~ may apply limits more stringent than MCLs.

It is important that this clarification is made to avoid any possible misunderstanding, and that any Basin Plan language additions or revisions applicable to all MCLs receive the opportunity for public notice and comment.

- b. Chapter 4, Implementation, Clarification of Test Methods: The SRSWPP consistently through the stakeholder process, including informal and formal comments, requested use of the total or total recoverable method of analysis for secondary MCL metals. Although the Central Valley Water Board's RTC documents the use of total analysis, the final Basin Plan Amendment language (Resolution R5-2018-0034, Attachment 1) references EPA methods 200.7 and 200.8 for metals analysis in Footnote 21 (page 83), which are methods that can be utilized to report total or dissolved concentrations. The specific method reference was not included in the March 2018 Draft Staff Report that went out for public comment, so we were not able to provide written comment on it. The specific method reference was first included in the May 21, 2018 Revised Staff Report, and we provided oral comments at the May 31 Central Valley Water Board public hearing requesting this clarification; therefore, this comment was raised timely before the Central Valley Water Board. The minor clarification request to add "for total recoverable concentrations" was denied without providing a justification after receiving the oral request at the May 31 meeting.

We appreciate the following RTCs (SRSWPP Comment No. 6 and 29) confirmation of the continued use of the acid-soluble (total recoverable) method (See grey highlighted text below):

SRSWPP Comment No. 6, RESPONSE: All references to "dissolved" analyses and to using a 0.45 micron filter have been deleted from the proposed Basin Plan amendment. The Central Valley Water Board is not proposing to revise the water quality objectives for Secondary MCLs. The proposed text for Chapter 4 has been revised to specify a filter size (1.5 microns) that Staff believes more closely approximates the level of filtration that normally occurs in conjunction with conventional drinking water treatment for raw surface water supplies or as water percolates through the vadose zone. The revised text for Chapter 4 also makes clear that the Central Valley Water Board has the authority to specify a different filter size where necessary to more accurately represent site-specific conditions based on scientific evidence submitted for their consideration and after consultation with Division of Drinking Water and public comment. In all cases, filtered and unfiltered samples will continue to be analyzed using the acid-soluble (total recoverable) method.

SRSWPP Comment No. 29, RESPONSE: The draft Basin Plan amendment has been revised so that it no longer implies that the water quality objectives for the Secondary MCL constituents will be based on dissolved analysis. Instead, compliance will continue to be assessed total recoverable method. However, that method will be applied to samples that have been filtered to reduce the unintended influence of total suspended solids (TSS) on the analysis. The revised Basin Plan amendment also states that the Board may also require unfiltered samples to be analyzed concurrently in order to evaluate water quality trends, assess downstream impacts and conduct anti-degradation analysis. Also, see response to **SRSWPP Comment No. 6**.

We request that the State Board consider the following minor clarification, which is consistent with the position in the Central Valley Water Board's RTC, to specifically require total recoverable analysis after the pre-filtration step to R5-2018-0034, Attachment 1, page 83 as shown in bold:

*"For receiving waters that are not exempt from surface water treatment requirements (i.e. 40 CFR Part 141, Subparts H, P, T & W), compliance with the Secondary Maximum Contaminant Levels for aluminum, copper, iron, manganese, silver, zinc, color and turbidity in Table 64449-A will be determined from samples that have been passed through a 1.5 micron filter to reduce filterable residue²⁰; metal constituents will then be analyzed **for total recoverable concentrations** using the acid-soluble procedure described in EPA Approved Methods²¹ as appropriate, or other methods **for total recoverable concentrations** approved by the Central Valley Water Board. Because this approach is intended to approximate the level of treatment normally applied to raw surface water sources before such water can be distributed to the public as drinking water, the Central Valley Water Board may adjust the filter size where necessary to more accurately represent site-specific conditions based on*

scientific evidence submitted for their consideration and after consultation with Division of Drinking Water and public comment. This provision applies solely to evaluating compliance with Secondary Maximum Contaminant Levels for certain metals and does not affect or alter the methods used to evaluate compliance with other water quality objectives that have been established for those same metals (e.g. as Primary MCLs, California Toxics Rule or National Toxic Rule constituents, or constituents with specific objectives listed in this Basin Plan).”

B. Technical Issues

a. Chapter 4, Implementation: Turbidity and Color

The SRSWPP provided stakeholder input, both informally and formally, throughout the process that turbidity and color are not appropriate to be pre-filtered before analysis. We provided input in May 7 written comments (SRSWPP Comment No. 21) and oral comments at the May 31 Central Valley Water Board public hearing requesting this clarification; therefore, this comment was raised timely before the Central Valley Water Board.

As described in SRSWPP Comment No. 21 below, filtering turbidity and color samples is antithetical to the purpose of these measurements. The measurement of turbidity and color represent aesthetic concerns that are caused by the presence of other specific contaminants, resulting in taste, odor, smell, or visual impacts. Comment No. 21 below explains that the raw water concentration of these constituents provide important information on the risks and type of drinking water treatment needed. In addition, the inclusion of turbidity and color in the pre-filtering is inconsistent with the DDW Memorandum (December 2017, See Attachment A). The RTC does not address how the analyses of turbidity and color were adequate. The justification for their inclusion appears to be that no regulatory compliance issues appear to exist for drinking water treatment facilities for these constituents, rather than a determination that it is scientifically appropriate or an assessment of their impact on source water quality, which does not consider the impact on water treatment required to maintain regulatory compliance. The RTC states that the Secondary MCLs have not changed, and are still based on total recoverable analysis. However, this BPA includes a significant change in the method of determining compliance with those objectives by allowing samples to be pre-filtered to remove a portion of the contaminant loading. In addition, the RTC references the narrative water quality objectives for color and turbidity and indicates that those remain, but it is unclear if those will continue to be monitored and regulatory compliance determined based on raw samples or if pre-filtering will be allowed. The modification request to remove turbidity and color was denied again without sufficient explanation after providing the oral request at the May 31 meeting.

SRSWPP Comment No. 21: Turbidity and color are summarily dismissed as constituents of concern in the Proposed BPA (Draft Staff Report, Subsection 7.1.5.1.3, p.372 and Appendix K, Section IX, p.K-28 to K-29) without

complete analysis. These constituents serve as surrogates of overall water quality, represent risk from other measurable constituents (such as organic and inorganic matter and microbiological organisms), and have more important correlations, most significantly as indicators of the presence of pathogens in a water supply and a driver of the type and amount of drinking water treatment provided. Turbidity represents a wide spectrum of particle sizes and each particle can serve as a host for other constituents of concern to adhere to. Risk to the MUN beneficial use from turbidity is not specific to a particle size. The turbidity evaluation presented in Appendix K, Section IX only considers impacts from one type of activity in the watershed (wastewater discharges), rather than all potential sources. Color is monitored in unfiltered water related to the MUN beneficial use and considered a critical indicator of potential water quality concerns.

SRSWPP Comment No. 21, RESPONSE: The Board acknowledges turbidity and color are important measures of water quality. They are included as water quality objectives in the Basin Plan. The Staff Report does not "summarily dismiss" these constituents but, rather, emphasizes that the water quality objectives for all Secondary MCLs (including turbidity and color) remain unchanged by the proposed Basin Plan amendment. The Staff Report merely acknowledges that based on publicly available reports that, in general, water supply agencies do not currently appear to have a significant problem meeting drinking water standards for color and turbidity.

We request that the State Board consider the following modification to retain analysis of samples for turbidity and color without pre-filtration in R5-2018-0034, Attachment 1, page 83 as shown in bold:

*"For receiving waters that are not exempt from surface water treatment requirements (i.e. 40 CFR Part 141, Subparts H, P, T & W), compliance with the Secondary Maximum Contaminant Levels for aluminum, copper, iron, manganese, silver, **and zinc, color and turbidity** in Table 64449-A will be determined from samples that have been passed through a 1.5 micron filter to reduce filterable residue²⁰; metal constituents will then be analyzed using the acid-soluble procedure described in EPA Approved Methods²¹ as appropriate, or other methods approved by the Central Valley Water Board. Because this approach is intended to approximate the level of treatment normally applied to raw surface water sources before such water can be distributed to the public as drinking water, the Central Valley Water Board may adjust the filter size where necessary to more accurately represent site-specific conditions based on scientific evidence submitted for their consideration and after consultation with Division of Drinking Water and public comment. This provision applies solely to evaluating compliance with Secondary Maximum Contaminant Levels for certain metals and does not affect or alter the methods used to evaluate compliance with other water quality objectives that have been established for those same metals (e.g. as Primary MCLs, California Toxics Rule or National Toxic Rule constituents, or constituents with specific objectives listed in this Basin Plan)."*

b. Chapter 4, Implementation, Filter Size

The SRSWPP did not provide written comment on the pore filter size because that concept was not included in the March 2018 Draft Staff Report provided for written public comment or any other materials prior to that date. This topic was first presented by the Central Valley Water Board in the Revised Staff Report on May 21, 2018. For the May 31 meeting, we presented oral comments on this topic, therefore this comment was raised timely before the Central Valley Water Board. The modification request to revise the pre-filter initial pore size was denied without sufficient explanation after providing the oral request at the May 31 meeting. In the SRSWPP Comments on the March 2018 Draft Staff Report, we presented our concerns on the use of dissolved analysis at 0.45 microns (Comment No. 6). The SRSWPP previously submitted technical information to show that conventional drinking water treatment produces treated water containing particles in a wide range, from 1 to 1,000 microns. We appreciate that the Central Valley Water Board considered our input and provided an alternative to the use of dissolved analysis. In the RTC, the Central Valley Water Board indicated that staff revised the implementation process to include a pre-filter at 1.5 microns to approximate conventional drinking water filtration. We do not believe that there is sufficient technical data to support the use of a 1.5 microns pre-filter to approximate drinking water filtration, and we instead suggest the use of a 2.0 microns pre-filter as an initial pre-filter step.

SRSWPP Comment No. 6, RESPONSE: All references to "dissolved" analyses and to using a 0.45 micron filter have been deleted from the proposed Basin Plan amendment. The Central Valley Water Board is not proposing to revise the water quality objectives for Secondary MCLs. The proposed text for Chapter 4 has been revised to specify a filter size (1.5 microns) that Staff believes more closely approximates the level of filtration that normally occurs in conjunction with conventional drinking water treatment for raw surface water supplies or as water percolates through the vadose zone. The revised text for Chapter 4 also makes clear that the Central Valley Water Board has the authority to specify a different filter size where necessary to more accurately represent site-specific conditions based on scientific evidence submitted for their consideration and after consultation with Division of Drinking Water and public comment. In all cases, filtered and unfiltered samples will continue to be analyzed using the acid-soluble (total recoverable) method.

The BPA Language in Attachment 1, pages 82 and 83 states, "For receiving waters that are not exempt from surface water treatment requirements (i.e. 40 CFR Part 141, Subparts H, P, T & W), compliance with the Secondary Maximum Contaminant Levels for aluminum, copper, iron, manganese, silver, zinc, color and turbidity in Table 64449-A will be determined from samples that have been passed through a 1.5-micron filter to reduce filterable residue²⁰;...".

²⁰ Filter size recommended in EPA Approved Methods 30 CFR Part 136 for Total Dissolved Solids and Total Suspended Solids and is used for removing suspended solids from a solid prior to analysis. Filtering the sample will remove suspended solids that may contribute to turbidity and color in samples that may negatively impact analytical results for metal concentrations while better representing the dissolved solids that may pass through a water treatment plant's filtration system.

The SRSWPP reviewed 40CFR136, as the above footnote appears to be an incorrect reference, and found no direct reference to a particular particle size to reduce filterable residue or distinguish between TDS and TSS. Three methods are identified as approved in this regulatory section (SM2540C/D-2011, ASTM D5907-13, and USGS I-1750-85/I-3765-85) for TDS and TSS. These methods do not provide a specific pore filter size for analysis; however SM2540 indicates that the pore filter should be less than or equal to 2 microns when filtering solids. In response to this new language, we submitted oral comments at the May 31 Central Valley Water Board meeting as follows:

“We continue to have the concern that there needs to be an appropriate selection of pore filter size. The revised BPA includes a first step to filter samples with a 1.5 micron pore filter. The revised BPA indicates that selection of this pore size was based on the threshold for suspended solids in the TSS/TDS analysis. The revised BPA also states that “...this approach is intended to approximate the level of treatment normally applied to raw surface water sources before such water can be distributed to the public as drinking water,...”. We are unaware of any confirmed relationship between the presence of suspended solids and representation of treated drinking water. Standard Method 2540 states that suspended solids are typically represented by particles greater than 2 microns. We cannot see any justification for using a filter size less than the 2 microns, as indicated in the method. If the Board intends to adopt an interpretation process based on the suspended particle threshold, we recommend that it be consistent with the cited method and that the nominal pore size match 2 microns.”

The SRSWPP believes that the BPA language should provide an initial pore filter size for the pre-filtration step based on sound science. There is currently no specific particle size that is documented to represent treated drinking water, so if the Central Valley Water Board intends to utilize the suspended particle threshold from the TDS/TSS analysis then it should be based on the pore filter size stated in SM2540 of 2 microns.

We request that the State Board consider the following modification to revise the initial pore filter size of the pre-filter step in R5-2018-0034, Attachment 1, page 83 as shown in bold:

“For receiving waters that are not exempt from surface water treatment requirements (i.e. 40 CFR Part 141, Subparts H, P, T & W), compliance with the Secondary Maximum Contaminant Levels for aluminum, copper, iron, manganese, silver, zinc, color and turbidity in Table 64449-A will be determined from samples that have been passed through a **4-52.0**-micron filter to reduce filterable residue²⁰;...”

Thank you for considering the SRSWPP comments. We appreciate the opportunity to share our stakeholder perspectives with the Central Valley Water Board and CV-Salts. Please do not hesitate to contact Elissa Callman at 916-808-1424 if you have any questions or would like to discuss our comments.

Sincerely,



Sherill Huun
Supervising Engineer

Attachment A: DDW Memorandum, December 2017

Cc: Darrin Polhemus, California Division of Drinking Water
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State Water Resources Control Board

TO: Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board

FROM: Darrin Polhemus
Deputy Director
DIVISION OF DRINKING WATER

DATE: December 6, 2017

SUBJECT: SAMPLING AND COMPLIANCE WITH MCLS WHEN APPLYING THEM AS OBJECTIVES IN WASTEWATER REGULATORY PROGRAM - REVISED

This memorandum supersedes the one issued on December 14, 2016, pertaining to the same subject.

The Central Valley Water Board's water quality control plans (Basin Plans) establish Primary and Secondary Maximum Contaminant Levels (MCLs) as water quality objectives for surface and groundwater within the Central Valley. The Basin Plans, however, do not presently describe how the Central Valley Water Board will implement those water quality objectives when developing waste discharge requirements or determining compliance with water quality objectives.

Central Valley Water Board surface and groundwater permitting programs seek to implement objectives that are fully protective of beneficial uses, while also not applying them in an overly stringent manner. The Division of Drinking Water seeks to maintain the highest quality and best sources possible for use as drinking water supplies. In this case, these two goals combine when considering the beneficial use of municipal and domestic supply, and when Primary and Secondary MCLs are the water quality objectives established to protect municipal and domestic supply.

Central Valley Water Board staff have conferred with me and the Division of Drinking Water staff to assess appropriate ways to apply the Central Valley Water Board's objectives based on MCLs when implementing its regulatory programs for waste dischargers and when monitoring ambient waters to ensure protection of public health for Primary MCLs and public welfare as well as consumer acceptance for Secondary MCLs.

The following is a summary of the determinations made during our discussions. These conclusions are not regulatory in nature, but the Central Valley Water Board may use them to inform future revisions to its water quality control plans.

Sampling for Dissolved Fraction vs. Total When Determining Secondary MCLs

Secondary MCLs help to ensure “consumer acceptance” and public welfare in delivered drinking water, and are based on preventing objectionable taste/odors and also preventing costs associated with potential staining and corrosion of pipes, fixtures, valves, and other plumbing materials.

- Division of Drinking Water evaluates compliance with Secondary MCLs based on samples collected at either groundwater sources or distribution entry points to essentially evaluate the quality of the water that will be delivered to a customer “at the tap.”
 - For surface water, or groundwater under the influence of surface water, this means that in nearly all cases the water has been coagulated, filtered, and disinfected at a permitted drinking water treatment plant prior to sample collection.
 - For groundwater not under the influence of surface water, a community water system’s source has typically been pumped from a relatively deeper aquifer when compared to the shallower monitoring wells used in the wastewater program and, therefore, suspended solids levels should be negligible.
- Surface and groundwater discharge permitting programs set limits at levels intended to prevent any exceedances of water quality objectives, but as a safeguard they also include effluent and receiving water monitoring. If effluent or receiving water monitoring indicate that the discharge is causing the receiving water to exceed a water quality objective for a Secondary MCL, the Central Valley Water Board would require the permittee to implement management measures to ensure that the discharge does not continue to cause or contribute to an exceedance of water quality objectives.
- Sampling for Secondary MCL constituents in groundwater can be complicated because of changing ambient conditions. Also, monitoring wells used in wastewater compliance determinations do not operate on a frequent basis, have lower flow rates and entrance velocities than drinking water wells, and therefore, may contain higher than expected solids content when compared to samples drawn from drinking water wells. The presence of solids with absorbed metals can inflate the total metals value without increasing the dissolved fraction.
- For these reasons, Division of Drinking Water staff and Central Valley Water Board staff agree that the Basin Plans could be amended to authorize compliance monitoring for the metals listed in Secondary MCLs Table A, in source waters for the protection of the MUN beneficial use, using tests other than “total,” such as other methods using variations of filtered samples, where they have been analyzed for their appropriateness.

Averaging Periods and Sampling

- Primary MCLs
 - *Nitrate*. Nitrate is an acute contaminant. For this reason, the Primary MCL for nitrate should be considered as either a single sample or a daily maximum. With respect to a single sample, drinking water regulations require a confirmation sample within 48 hours. (Cal. Code Regs., tit. 22, § 64432.1.) The two samples are then averaged, unless there are concerns with the validity and representativeness of the first sample. The Division of Drinking Water recommends this process for the Central Valley Water Board's regulatory program sampling for nitrate.
 - *Arsenic and metals*. These constituents can be susceptible to seasonal fluctuations and in many cases are naturally occurring. For these constituents, Division of Drinking Water staff recommends annual running averages for compliance periods (the Division of Drinking Water uses quarterly sampling results). In addition, to ensure that treatment systems are operated properly, the Division of Drinking Water recommends increased sampling frequencies when individual sampling events are abnormally high. Division of Drinking Water staff recommend using language similar to Title 22 regulations for sampling and reporting of Primary MCLs.
- *Secondary MCLs*. Constituents below their Secondary MCL levels ensure consumer acceptance and protect public welfare. Because of this, Division of Drinking Water and Water Board staffs agree that authorizing an annual averaging period is acceptable for measuring compliance with these objectives.

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