



# CVCWA

## Central Valley Clean Water Association

*Representing Over Fifty Wastewater Agencies*

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May 7, 2018

Pamela Creedon, Executive Officer  
Dr. Karl Longley, Chair  
California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670

*Sent via Electronic Mail*

**SUBJECT: Proposed Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Incorporate a Central Valley-wide Salt and Nitrate Control Program**

Dear Ms. Creedon and Dr. Longley,

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to comment on the Proposed Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin (Basin Plans) to Incorporate a Central Valley-wide Salt and Nitrate Control Program (Proposed Amendments). 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. We approach these matters with the perspective of balancing environmental and economic interests consistent with state and federal law.

CVCWA greatly appreciates the time and effort that the Central Valley Regional Water Quality Control Board (Regional Board) has invested into the development of the Proposed Amendments and the leadership you have shown through the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) stakeholder process. CVCWA also appreciates the opportunity to work extensive with other stakeholders participation in CV-SALTS which has lead up to the development of the Proposed Amendments.

Salinity and nitrate regulatory issues are of critical importance and interest to our members, who serve communities throughout the Central Valley. As such, CVCWA was one of the first members of the Central Valley Salinity Coalition (CVSC), a group of stakeholders that have supported through funding and participation. CVCWA has worked with and supports the written comments provided by the CVSC on the Proposed Amendments. To the extent that comments were included in the CVSC's letter, we are generally not repeating them here unless we are offering specific suggested language changes, or our request is somewhat different.

CVCWA offers the following comments on the Proposed Amendments.

**A. Wider Participation to Successfully Reach the Goals of CV-SALTS**

CVCWA supports the goals that have been identified and discussed at length in CV-SALTS Executive Committee's Policy meetings. CVCWA believes that the actions to achieve the goals of both the Nitrate and Salinity Control Programs are of statewide and national significance. The Salt and Nitrate Management Plan (SNMP) requires that the State and Regional Water Boards coordinate with other federal, state, local agencies, districts, associations and other entities that use, transport, or otherwise impact the Central Valley's waters. A key recommendation is that responsible parties must be identified and must participate in and provide proportional funding to the SNMP components as appropriate. The aggregate costs for the full implementation of the proposed nitrate control program and the salinity control program as estimated in Chapter 8 are beyond the financial capability of Central Valley permittees. External funding by the State and federal government, as well as California's communities outside the Central Valley that utilize waters from the Central Valley will be ultimately be required to achieve these goals. Participation for these entities should begin with the Prioritization and Optimization Study (P&O Study) as other entities using or benefiting from water derived from the Central Valley and by the State and federal funding partners who will ultimately be needed to provide significant funding support in Phases II and III of the Salinity Control Program. CVCWA believes that this joint funding is important to create involvement and buy-in by State and Federal partners for Phases II and III.

We appreciate that the Proposed Amendments recognize this fact, and especially as it relates to the salinity control program, and recommends all parties (permittees, entities using or benefiting from water derived from the Central Valley, Water Boards, other stakeholders) to secure the long-term funding needed to implement the two control programs. We recommend that the Proposed Amendments be very clear about financial participation from entities that do not have permits with the Regional Water Board, but benefit from Central Valley waters.

CVCWA recommends the following specific edits to address our comments.

- On pages 31, 131, and 202:

Modify the statement “Long-term implementation of the Salt and Nitrate Control Program is achieved primarily through Regional Water Board permitting actions (i.e., waste discharge requirements or conditional waivers)” to include a discussion of participation, including funding and support, by other State and Federal agencies, users and those benefitting from Central Valley waters.

- Page 17 should be revised to read:

The Salt Control program is structured to encourage dischargers of salinity and parties responsible for the movement of salinity throughout the Central Valley and those that use Central Valley waters outside of the Central Valley to participate and fund the P&O Study.

- Page 26, above the section titled “Recommendations to Other Agencies,” add the following paragraph to the Executive Summary

#### **Funding and Participation by Other Agencies and Responsible Parties**

Parties other than existing permittees contribute to salt and nitrate loading in the Central Valley. All users of Central Valley waters, within and outside of the Regional Water Board’s jurisdictional area, are considered stakeholders responsible for the successful implementation of the Salt Control Plan. Significant participation and actions by federal, state, local agencies, districts, associations and other entities that use, transport, or otherwise impact the Central Valley’s waters will be required to fully implement the SNMP. These amendments propose recommended actions that should be taken by other governmental and public agencies and organizations to implement the Salt Control Program. A key recommendation applicable to all responsible parties identified is for these entities participate in the P&O Study to be done under Phase I, and in the other two phases of the Salt Control Program as appropriate. Participation in the Phase I P&O Study may be done by providing financial, technical and policy support to the P&O Study. An ongoing effort will be required to identify responsible parties, and to determine their financial responsibility and other necessary actions.

- Page 13 of the Executive Summary, the Proposed Amendments describe a third-party coalition of regulated dischargers will manage and fund the P&O Study. It would be more accurate to rephrase this sentence to read: “A third party entity made up of a coalition of regulated dischargers and other entities contributing to

the salt problems in the Central Valley and benefitting from use of Central Valley waters outside of the Central Valley will manage and fund the P&O Study.”

- Page 31 first sentence, last paragraph: Add a paragraph after this that states: “Additional implementation authorities, affected responsible parties, and required actions related to salinity and nitrate control will be determined in Phase I. “
- Page 34, under Phase I, add a bullet item on pages 34 that states: “Coordinate with state and federal agencies to identify other responsible parties and their requirements for participation and funding.”
- Page 77, the Proposed Amendments state that “Permittees that discharge salt or nitrate in the Central Valley Region” shall participate in preparing necessary reports for the Surveillance and Monitoring Program (SAMP). It is more accurate for this section to refer not only to permittees discharging salt or nitrate, but to include reference to the fact that other entities using water from the Central Valley can contribute to salt and nitrate problems in the Central Valley. These entities should also contribute to Program Assessment Reports and other elements of the SAMP.

As mentioned previously, other entities—who have not been specifically named or identified—share the responsibility for salt issued in the Central Valley. Early in the implementation of Phase I of the Salt Control Program, key information about the costs and funding of Phase I must be determined. Such information includes: (1) the comprehensive costs of implementing the P&O Study, SAMP, Central Valley Salinity Coalition membership, and any other costs associated with the Salt and Nitrate Management Plan; and (2) the apportionment of these costs among dischargers and the other responsible parties who have not yet been identified.

This issue is noted on page 403 of the Staff Report as well. CVCWA requests that this section of the Staff Report, and the language of the Proposed Amendments themselves, clearly articulate mechanisms to compel these other entities to participate financially in the P&O Study and SAMP. This could be through D-1641 or other water rights permits. This will ensure that all types of entities that contribute to salt issues in the Central Valley will bear some responsibility for developing solutions.

## **B. Conditional Prohibitions on Discharges of Salt and Nitrate**

### **1. Conditional Prohibition on Salt Discharges**

The Proposed Amendments propose to prohibit discharges of salt and nitrate, unless the discharger selects an applicable compliance pathway. The discharge prohibition would

not apply to a specific discharger until that discharger receives a Notice to Comply. In an effort to reduce potential uncertainty regarding which limitations may apply during the time between when the Proposed Amendments are adopted and the time that a discharger receives a Notice to Comply, CVCWA offers the following clarification to the Basin Plan Amendment language for the conditional prohibition on salt discharges in the second paragraph on page 74, as shown in red:

For permittees subject to the Conditional Prohibition, the prohibition shall apply from the time of receiving a Notice to Comply until such time that the permittees' existing waste discharge requirements or conditional waivers regulating the discharge of salts are updated or amended to reflect requirements of Phase I of the Salinity Control Program, or until such time that the Regional Water Board affirmatively notifies the permittee that their permit complies with the Phase I of the Salt Control Program without the need for further update or amendments. Until such time as the discharger receives a Notice to Comply, the relevant waste discharge requirements or conditional waiver provisions, including any applicable compliance schedule, governing the discharge of salts shall remain in force.

This clarification will enable publicly-owned treatment works (POTWs), which cannot easily cease discharges, to better understand the applicable limitations on discharges of salt before the POTW receives a Notice to Comply. This will ensure that POTWs can maintain compliance with the relevant limitations on salt discharges.

Regarding the conditional prohibition on salt discharges, there is currently an inconsistency between the language used in the Proposed Amendments and the description of the program in the Staff Report on the Proposed Amendments. Proposed Amendments, pp. 45, 74. provide that dischargers must notify the Regional Board of the compliance pathway they have selected within six (6) months of *receipt of the Notice to Comply* with the conditional prohibition. On page 260 of the Staff Report, the Staff Report provides that dischargers must decide which compliance approach they will use under the Salt Control Program within six (6) months of the *effective date of the Proposed Amendments*. Page 260 should be corrected to be consistent with that the six month period is triggered by the Notice to Comply. Lastly, with regard to the Alternative Salinity Permitting Approach, the Regional Board should consider issuing a blanket NPDES permit amendment for all existing NPDES permittees who have elected the Alternative Salinity Permitting Approach within six (6) months of adoption of the Proposed Amendments. The Regional Board has done this in the past for large-scale projects that affect numerous NPDES permittees, including in creating the Delta Regional Monitoring Program. This will provide necessary clarity and protection from risk of citizen lawsuit liability under the federal Clean Water Act, because it will more plainly set forth the obligations of the participating discharger until the discharger's permit can be renewed with language consistent with the Proposed Amendments.

## 2. Conditional Prohibition on Discharges of Nitrate to Groundwater

The conditional prohibition for discharges of nitrate to groundwater is substantially similar to the conditional prohibition on salt discharges. Accordingly, CVCWA requests that the same modification to the language be made to this conditional prohibition to again ensure that dischargers, including POTWs, know the applicable limitations on discharges of nitrate, if any, from the time the Proposed Amendments are adopted until the discharger receives a Notice to Comply. CVCWA's recommended change to the provision, found in the second paragraph of page 75, are shown in redline:

For permittees subject to the Conditional Prohibition, the prohibition shall apply from the time of receiving a Notice to Comply until such time that the permittees' existing waste discharge requirements or conditional waivers regulating the discharge of nitrate are updated or amended to reflect requirements of the Nitrate Control Program, or such time that the Regional Water Board affirmatively notifies the permittee that their permit complies with the Nitrate Control Program without the need for further update or amendments. Until such time as the discharger receives a Notice to Comply, the relevant waste discharge requirements or conditional waiver provisions governing the discharge of nitrate shall remain in force.

Additionally, CVCWA recommends clarification to the text on pages 19 and 224 to be consistent with the texts on Pages 57 and 229 regarding applicability of the Nitrate Control Program to non-basin areas rather than traditional permitting of Nitrate outside the Control Program.

In areas of the Central Valley where there are no identified groundwater basins or subbasins, the Nitrate Control Program does not apply unless the Executive Officer of the Regional Water Board determines based on the specific facts of the discharge that it should be subject to the Nitrate Control Program and the Executive Officer of the Regional Water Board notifies the discharger accordingly will apply when the Regional Water Board's Executive Officer determines it is necessary and appropriate to address nitrate discharges to localized groundwater.

## 3. Definition for Conditional Prohibition

In the Definitions section, on page 84, CVCWA requests that the following changes be made to the definition of "conditional prohibition":

CONDITIONAL PROHIBITION: Conditional prohibitions of discharge can be established in the Basin Plan for any type of discharge. (Wat. Code § 13243) A

conditional prohibition may specify conditions or areas where the discharge of waste, or the discharge of certain types of waste, will not be permitted, unless specific conditions are met. A conditional prohibition established in the Basin Plan is directly enforceable by the Regional Board even in the absence of WDRs or a waiver regulating the discharge or discharger.

### C. Salinity Control Program and Water Quality Objectives for Salt

#### 1. Stakeholder Involvement and a Public Process for Transitions between Phases

The Proposed Amendments address salinity in the Central Valley through a phased approach. Because the stakeholder process has been so instrumental leading up to the development of the Proposed Amendments, CVCWA requests that the discussion and development of Phases II and III include stakeholders. Additionally, CVCWA believes some revisions to the text discussing the Phase I to Phase II Re-Evaluation will clarify the intent for the process:

Pages 46-47 and 218:

Upon completion of Phase I, and prior to initiation of Phase II of the Salt Control Program, the Regional Water Board will re-evaluate the Conservative and Alternative Salinity Permitting Approaches applicable under Phase I of the Salinity Control Program. The Regional Board shall consider re-convening a stakeholder group to assist in the re-evaluation. In this re-evaluation, the Regional Water Board shall consider use the findings of the P&O Study, results from surveillance and monitoring programs, ~~considerations proposals~~ for use of other permitting options or approaches, and progress made towards meeting the overarching goals of the Salt Control Program. ~~to re-evaluate the Conservative and Alternative Salinity Permitting Approaches applicable under Phase I of the Salinity Control Program.~~ Based on the findings of this re-evaluation, the Regional Water Board may modify or re-adopt the Phase I permitting approaches and policies (e.g., variance and exceptions), ~~to make~~ thereby making them applicable to Phase II. Such amendments must be completed prior to the initiation of Phase II of the Salinity Control Program.

Page 206:

Based on the findings of the P&O Study, through a stakeholder and public process, the Regional Water Board will review the Basin Plan and consider whether modifications to the Basin Plan are required to facilitate implementation of Phases II or III.

Page 209:

Prior to implementation of Phase II, through a stakeholder and public process, the Regional Water Board must review the Salinity Control Program and reconsider compliance pathways for Phase II.

2. Clarity on the P&O Study Applicability as it relates to NPDES Permit

CVCWA questions why participation in the P&O Study is found as an alternative compliance mechanism only applicable to receiving water limits and not effluent limits. (See pages 44 and 214.) CVCWA recommends participation in the P&O study be applicable to both effluent limits and receiving water limits.

**D. Nitrate Control Program and Water Quality Objective for Nitrate**

1. Nitrogen Speciation and Permitting

In the Proposed Amendments' discussion of the water quality objectives for nitrate, the Proposed Amendments summarize current approaches to regulating nitrate discharges from various dischargers. CVCWA appreciates that clarifications have been made to include other forms of nitrate that have been used in permitting to ensure that the nitrate objective is met when it is reasonably expected that other forms of nitrogen (ammonia, TNK, etc.) will convert to nitrate in groundwaters. To this end, we recommend that additional clarifications be made in two places:

Page 31:

Include the footnote (as is on page 51) at the header of the Salt and Nitrate\*  
Control Program.

\*"The implementation provisions in this Nitrate Control Program apply to discharges of nitrate to groundwater. To extent that the Regional Water Board uses other forms of nitrogen speciation (e.g., total Nitrogen and nitrite + nitrate) to address nitrate discharges, this Control Program would also apply in those circumstances."

Page 100:

For the purposes of this Program, salinity and its constituents include, and are limited to, the following: electrical conductivity, total dissolved solids, chloride,

sulfate and sodium. Nitrate includes nitrate and other forms of nitrogen speciation (e.g. total inorganic nitrogen (TIN) and total Kjeldahl nitrogen (TKN)) used to address nitrate in groundwater.

In the discussion of groundwater discharges of municipal wastewater, the summary does not include the nuance for establishing an effluent limitation for total nitrogen. Specifically, this summary does not acknowledge prior direction from the Regional Water Board that must make specific findings to justify applying a total nitrogen effluent limitation in a municipal discharger's waste discharge requirements. In order to more accurately reflect the current state of regulations relating to total nitrogen effluent limitations, CVCWA proposes the following revision to page 174 of the Staff Report:

Effluent limitations are often included for nitrate, or in certain situations for another nitrogen species (e.g., total nitrogen). However, when effluent limitations for other nitrogen species are used, the limitation must be accompanied by findings showing substantial justification for using another nitrogen species. The effluent limit should be set to account for the actual amount of nitrogen that is expected to convert to nitrate in the receiving waters after undergoing transformations in the soil profile.

In addition, CVCWA would recommend breaking the following sentence, referring to electrical conductivity in the Tulare Lake Basin, into a separate paragraph because it relates to a different constituent.

Appendix C to the Staff Report also describes the current mechanisms for regulation groundwater discharges of nitrate by municipal dischargers. Similarly, the discussion on page C-11 does not acknowledge that the Regional Board must find a substantial justification for imposing an effluent limitation for total nitrogen. It also incorrectly implies that there is a Maximum Contaminant Level (MCL) for total nitrogen or that the appropriate translation between nitrate and total nitrogen is the same. Total nitrogen contains nitrogen compounds (approximately 2 mg/L) that do not convert to nitrate. Therefore, if Total Nitrogen was used instead of Nitrate, a limit would be based on 12 mg/L of Total N rather than 10 mg/L of Nitrate CVCWA suggests the following revision to this paragraph:

Effluent limitations are also included for nitrate ~~or total nitrogen and~~ are set equal to the MCL of 10 mg/L nitrate as N. Effluent limitations for other nitrogen speciation such as total nitrogen must be accompanied by findings showing substantial justification for using a different nitrogen speciation, which does not have an MCL and is distinguishable from nitrate, and the limitation must be adjusted to account for the amount of nitrogen that is expected to convert to nitrate in the receiving waters after undergoing transformations in the soil profile.

Again, CVCWA would recommend breaking the sentence following this edit, referring to electrical conductivity in the Tulare Lake Basin, into a separate paragraph because it relates to a different constituent.

#### 1. Timing of Management Zones and Path Choice

CVCWA appreciates that provisions are included in the Proposed Amendments to allow provisions for new or expanding permittees to comply with the Nitrate Control Program at a later date through a Management Zone. For consistency with text that allows time schedules for future management zones (see page 66), we suggest a footnote be added to the texts on pages 20, 21, 54 and 224:

... or in circumstances when a management zone is not an available option.\*

The discharger shall indicate how they intend to comply with the Nitrate Control Program, i.e., Path A or Path B, if a management zone exists.\*

\* If a Management Zone does not exist at the time of application, the Regional Water Board may use its discretion to issue a time schedule to the discharger for complying with the Nitrate Control Program through a later formed Management Zone.

#### 2. Prioritization of Basins

On Page 201, there is an expanded description of the Nitrate Control Program Goals which includes complying in all areas as soon as possible and can be interpreted to include all areas, even without groundwater basins or where not necessary. To be consistent with the Nitrate Control Program, we recommend the following edits:

The need to ensure a safe, reliable drinking water supply is the highest priority for the management of nitrate under the Salt and Nitrate Control Program and is to be complied with as quickly as possible. in all areas Groundwater Basins within the Central Valley Region have been prioritized to address the most impacted areas first.

#### E. NPDES Permitting and Consistency

Additional text edits are needed for clarity and consistency as it relates to NPDES permitting and or consistency between NPDES and Non-NPDES Programs:

1. To provide consistency between the text and table, and between programs, the following edits are recommended to Table S-1 on page 38 and Table 4-3 on page 207:

~~A~~Limited new or expanded allocation of assimilative capacity.  
Consideration if ~~may be authorized only where~~ a permittee can demonstrate that the impact of the new discharge or the increased discharge is temporary or de minimis.~~a~~Determinations are subject to the discretion of the Regional Water Board.

2. On page 40, clarify that permit limits are set only if required by reasonable potential.

1. Permit Provisions – Permit limitations, if required, shall be set as follows:

3. On the pages indicated below, clarify that changes triggering the provisions for salt and/or nitrate are due to increases in concentrations or mass.

“A new permittee, or existing permittee seeking a permit modification due to a substantial and/or material change which increases salt concentration or load to ~~to~~ from a facility, shall indicate how the permittee intends to comply with the Salt Control Program at the time of application and provide the required information to support the decision, as described above. (pg. 46 & 217)

(after a permittee in a prioritized basin receives a Notice to Comply or plans on making a material change to their discharge that increases nitrate in the discharge and subjects them to the Nitrate Control Program) will be for the permittee to conduct an initial assessment of groundwater conditions and to characterize nitrate conditions in their discharge. (pg 340)

4. Revise the following on pages 41 & 212 for consistency as it: (1) provides clarity that was discussed and agreed to during CV-SALTS discussions, (2) provides uniformity with areas of the document where changes were triggered by increases in discharges and (3) provides consistency in approaches between ground and surface water for salts. Consideration to maintain existing allocations were based on existing levels and were not meant to discourage improvements at facilities that benefitted salts and/or nitrates. For example, a facility which changed its disinfection system from chlorine to UV normally would see a decrease in effluent salinity. As currently written, if the facility discharged to groundwater, the Board could consider maintaining the granted assimilative capacity if an antidegradation analysis was performed but is excluded in the NPDES section if there are material changes (See pages 18, 19, 21, 57, 66, 229, 240 for examples based on increases and pages 39, 211, etc. for examples).

“The Regional Water Board may consider maintaining any previously approved allocations of assimilative capacity, if ~~there have been no material changes to the~~

~~discharge and~~ the previously approved allocation was granted with the support of an antidegradation study or analysis.” (pages 41 & 212)

**F. Application of Secondary MCLs and Use of Translators for MCLs**

CVCWA appreciates the proposed changes to deal with the implementation of secondary maximum contaminant levels (Secondary MCLs) for salt and for other constituents in NPDES permitting, WDRs and 303(d) listings. CVCWA believes that these changes are necessary to enable reasonable regulation of Secondary MCL constituents into the future

1. Translators

CVCWA appreciates the Proposed Amendments’ implementation language concerning translators. Attachment A is a memorandum for inclusion in the record that summarizes raw and finished water concentrations data to demonstrate the removals that occur in Central Valley drinking water treatment plants. This data supports the continued use of dissolved measurements in the NPDES permitting program and the future use of translators to recognize the removals of Secondary MCLs that occur prior to delivery of finished tap water to drinking water users. This data also illustrates that Secondary MCL constituents are not currently a significant problem to drinking water agencies in terms of compliance with Safe Drinking Water Act Secondary MCL requirements in finished water.

The Proposed Amendments’ implementation language currently limits the availability of translators for Secondary MCLs to only metals, color, and turbidity. There are other constituents with Secondary MCLs for which translators may be warranted. Accordingly, CVCWA requests that the following revisions be made to the Proposed Amendments on page 111 to broaden the discussion of translators:

For receiving waters~~s~~ that are not exempt from surface water filtration requirements, the use of dissolved ~~samples metal~~ to set and measure compliance with metal constituents (aluminum, copper, iron, manganese, silver and zinc) in Table 64449-A as well as turbidity, ~~odor threshold~~, and color.

Pursuant to the above paragraph, for a period of no more than 10 years or upon development of a translator, reasonable potential analysis will be conducted based on dissolved ~~metals~~ data using a 0.45-micron filter in accordance with Federal Regulations, 40 CFR Part 136. In cases where effluent limitations are required per federal NPDES regulations, the permit will allow development of a translator ~~to covert the dissolved objective to effluent limitations based on total metals.~~

~~Unless translators are developed, a~~After 10 years from effective date, ~~or within one year after appropriate translators are developed if before 10 years,~~

~~translators will be used to conduct~~ reasonable potential analysis will be assessed using total ~~metals~~ effluent data and to establish limitations in NPDES permits, where required under federal regulations for ~~metal~~ constituents in Table 64449-A.

Appropriate studies will be conducted during the 10-years to establish the appropriate guidance and application of translators ~~to be used to convert total to dissolved fractions~~. Translators may be determined by water body segment, water body or region, taking into account the location of existing drinking water treatment facilities, current state and federal drinking water treatment requirements and existing treatment capabilities, and the anticipated change in source water at the drinking water treatment facility.

Similar changes should be made to the language on Page 306 of the Staff Report for consistency.

CVCWA agrees that in implementing the current Basin Plan language which recognizes treatment requirements, it is appropriate for dischargers to work collaboratively with Regional Water Board staff and water purveyors to better understand natural background conditions, trends, and filtration and disinfection procedures that better represent area treatments systems supplying drinking water. It also may be appropriate to develop guidelines in conjunction with the Division of Drinking Water and affected stakeholders in the future to support how the following existing Basin Plan provision would be considered when assessing waterbodies and developing WDRs for discharges to inland surface waters: *“The 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.”*

## 2. Applicability of Secondary MCLs and Short Term Value

Secondary MCLs are applicable to community water systems. CVCWA suggests when the text in the Proposed Amendments is specifically talking about Secondary MCLs as they relate to drinking water standards of Title 22, the term “community water systems” rather than MUN or municipal and domestic supply should be used. To the extent the discussion is about the water quality criteria, the latter would be appropriate. Additionally, the Short Term range is also under the umbrella of Title 22 regarding human welfare and consumer acceptance. For further discussion of this issue, please see the CVSC’s comment letter. As such, we propose the following edits:

Page 11:

For community water systems ~~MUN-supply~~, TDS concentrations at or below 500 mg/L are recommended with an upper range of 1,000 mg/L and a short-term range up to 1,500 mg/L to protect human welfare and provide for consumer acceptance (Title 22 of the California Code of Regulations).

Page 159:

For ~~municipal and domestic supply~~ community water systems, TDS concentrations at or below 500 mg/L are recommended with an upper range of 1,000 mg/L and a short-term range up to 1,500 mg/L to protect human welfare (such as limiting corrosion of pipes) and provide for consumer acceptance.

### **G. Surveillance and Monitoring Program**

In the Executive Summary, on page 14, the description of the goals for the Salt and Nitrate Monitoring Program includes a reference to developing “*statistically-defensible* ambient water quality determinations and trends.” (Emphasis added.) The phrase “statistically-defensible” should be removed and replaced with “sufficiently robust”, the language used in the Proposed Amendments. We recommend using the phrasing “sufficiently robust” on page 266 (twice) and elsewhere when describing the goals of the SAMP.

On page 65 of the Proposed Amendments, recognize the use of SAMP data reports as a default source:

May use default information in or referenced by, the Central Valley SNMP (2016), periodic assessments provided through the Surveillance and Monitoring Program, or provide supplemental information that includes water quality conditions in the shallow and upper zones; . . .

### **H. Variance Policy**

On page 91, paragraph H, the Proposed Amendments limit the duration of a variance to a maximum of 10 years. In 2015, the United States Environmental Protection Agency (US EPA) adopted a new rule that established procedures and strictures governing water quality standards (WQS) variances. In this rule, the US EPA does not limit variances to ten years, but rather anticipates variances lasting more than ten years on occasion. (40 C.F.R. § 131.14(b)(iv)-(v) [“For a WQS variance with a term *greater than five years*, a specified frequency to reevaluate the highest attainable condition. . . Such reevaluations must occur no less frequently than *every five years after* [US] EPA approval of the WQS variance”].) Accordingly, CVCWA requests that the 10-year maximum duration for a variance under the

Proposed Amendments be removed and replaced with a reference to the necessary justification an applicant must provide:

A variance or any renewal thereof shall be for a time as short as feasible and shall not be granted for a term longer than ~~ten years~~ justified in the applicant's request.

On Page 95, the sentence "No proven means exist at present that will allow ongoing human activity in the Basin and maintain groundwater salinity at current levels throughout the Basin" should be deleted or modified to be applicable to variances, which are a surface water tool.

On Page 95, a sunset date of 15 years from the effective date is included for the Salinity Variance. Given that the Salinity Control Program timeframe will not begin until the Notices to Comply with the Salinity Control Program are issued, the Executive Officer can extend the dates up to 5-years beyond the 10-year timeframe, and time will be needed for Basin Plan Amendments for Phase II, CVCWA recommends the expiration date be extended either to 20-years or at minimum, 16-years from the Notice to Comply to the Salinity Control Program.

Additionally, in paragraph F on page 97, CVCWA requests that, following the first sentence regarding the necessary demonstration for a salinity variance, the Proposed Amendments should state that if such a showing is not able to be made, a salinity variance could still be approved through the use of the general variance authority that exists in the Basin Plans.

Furthermore, some of the language used on page 23 regarding when variances are commonly employed is not consistent with the purpose and use of variances. CVCWA suggests the following revision to reflect typical and appropriate conditions for using the variance tool:

Variances are most commonly employed when there is no feasible, practicable or reasonable means for a point source discharge to surface water governed under the federal Clean Water Act; to meet water quality standards, when evaluating if a beneficial use or water quality standard is appropriate and attainable, or when a use or standard is unattainable today (or for a limited period of time) but feasible progress could be made toward attaining the designated use and criterion in the future. ~~and it is not feasible, practicable or reasonable to prohibit the discharge.~~

Additionally, the discussion on page 44 related to NPDES surface water discharges choosing the Alternative Salinity Permitting Approach in paragraph 2 appears to limit the availability of variances to only those dischargers that cannot meet receiving water limits. It is

unclear why variance availability is limited in this fashion. This should be expanded to include those dischargers who cannot meet applicable effluent limitations, as well.

Lastly, on pages 46 and 217, Variances should be included as one of the options for the Regional Water Board in cases where a time schedule order (TSO), Compliance Schedule, or previously approved variance expires in Phase I.

If the permittee has an approved salinity-related Time Schedule Order, ~~or~~ Compliance Schedule, or variance that expires prior to the completion of the Phase I P&O Study, the Regional Water Board, at its discretion, may extend the Time Schedule Order or Compliance Schedule, or renew or grant a variance, as appropriate and allowed by other applicable policies.

## I. Environmental Setting

Upon review of the Executive Summary for the Proposed Amendments, CVCWA would like to provide some clarifying comments and suggestions on various sections of the Executive Summary.

On page 6, under the main environmental setting heading, CVCWA proposes the following clarifications to the program description:

The Salt and Nitrate Control Program is applicable to waters apply to all surface and groundwater within the Central Valley Region. The Salt Control Program applies to all surface and ground water with MUN and AGR designations and the Nitrate Control Program applies to all groundwaters with a MUN designation.

On page 10, under the surface water quality heading, the Proposed Amendments state that one water body in the Sacramento River Region is impaired for nutrients. CVCWA requests that this statement be deleted, since it is not indicative of a human health-based nitrate problem and may be misleading, particularly given the fact that this statement immediately follows discussion of the primary MCL for nitrate.

Additionally, the statement that salt is exported from the Sacramento River region to the Delta and the San Joaquin and Tulare Lake regions should be revised or removed entirely. This statement implies that Sacramento River salinity is the cause or a contributor to the salinity issued in the San Joaquin and Tulare Lake regions. However, the Sacramento River provides good quality water to these areas. High salinity exports to the San Joaquin and Tulare Lake regions occur when riverine freshwater inflows are low and water project pumps in the Delta and tidal action draw saline water from the Bay into the Delta. Accordingly, if the statement is not removed, the above description should be moved to the Delta Region description two paragraphs down on page 10.

On page 11, under the salinity in groundwater heading, the Proposed Amendments state that concentrations of salt (as total dissolved solids [TDS]) above 2,000 mg/L are anticipated to have a severe impact on irrigated agriculture. This assertion is based on information contained in the Ayers and Westcot, 1985 study, which is known to be a conservative basis for assessing impacts to agriculture. The actual impact would depend on crop type, irrigation practices, and other factors. CVCWA requests that the Proposed Amendments acknowledge the conservatism of the statement made and the factors that control salt impacts on crops. Additionally, the discussion of salt concentrations in MUN supplies should include the short term range maximum: “For MUN supply, TDS concentrations at or below 500 mg/L are recommended with an upper range of 1,000 mg/L, and a short-term range up to 1,500 mg/L, to protect human welfare and provide for consumer acceptance. . . .”

On page 11, under the nitrate in groundwater heading, the Proposed Amendments state that elevated nitrate levels occur in the central and eastern portions of the valley floor rather than along the west side. It is requested that this sentence be modified to state that “elevated levels of nitrate mostly occur in the San Joaquin Valley.” This revised statement is more consistent with the information provided in Table B-2.

On Pages 143 and 145, Both the Sacramento River and Tulare Lake Land Cover and Land Uses sections should include information on Mountain ranges including the Sierras, Tehachapi, Coastal Range and Foothills.

## J. Other Recommendations

### 1. Executive Officer Authority to Extend Milestones:

The propose Amendments are clear that the Executive Officer has the authority to extend completion dates for the Priority and Optimization Study (P&O Study) and Management Zones, but is silent that this authority also extends to milestones, which are included in many locations of the Proposed Amendment. CVCWA recommends this authority be clear:

Page 34:

“the completion date, and interim milestones for any phase....”

Page 41:

At the end of the first paragraph under the heading “Phase 1 Alternative Salinity Permitting Approach,” add a sentence:

At the discretion of the Regional Water Board Executive Officer, the completion date or milestones may be modified or extended.

Page 205:

At the discretion of the Regional Water Board Executive Officer, the completion date for any phase or milestone may be modified or extended up to five years based on the need to develop Basin Plan amendments to support implementation of the next phase, reduction in anticipated staff resources, or other factors.

## 2. Additional Tulare Lake Basin Plan Edits for Consistency with CV-SALTS

The Tulare Lake Basin Plan on Page IV-5 contains a forward that we recommend be updated for consistency with CV-SALTS, the Proposed Amendments and the SNMP. Other specifics are unclear if they should remain in the Basin Plan or if they should be updated or removed. In these sections CVCWA *comments are shown in italics*:

Degradation of ground water in the Tulare Lake Basin by salts is unavoidable without a plan for removing salts from the Basin. A Salt and Nitrate Management Plan (SNMP) was developed in 2016. A valleywide drain to carry salts out of the valley remains the best technical solution to the water quality problems of the Tulare Lake Basin. The drain would carry wastewater generated by municipal, industrial, and agricultural activities, high in salt and unfit for reuse. While other management actions are being evaluated and planned for, the only other solution is to manage the rate of degradation by minimizing the salt loads to the ground water body.

*For consideration of appropriateness given the Proposed Amendments*

- Long-term continuous biological monitoring would be required. *(Note that this may not be necessary if this is by pipe rather than drain.)*
- The Regional Water Board also encourages proactive management of waste streams to control and manage salts that remain in the Basin. Application or disposal of consolidated treated effluents should be to the west, toward the drainage trough of the valley. *(Siting to be determined by the P&O Study).*
- If feasible, salts in waste streams should be processed for reuse to reduce the need to import salt. Salt import should be reduced by assuring that imported water is of the highest quality possible. Water conveyance systems used to import water into the Basin should not be used to transport inferior quality water. *(Since recycled water from the SF Bay area is a component of the P&O study, this may be inconsistent with the last two points).*

On Pages 51 and 52 of the Proposed Amendments:

Revise language concerning source control as follows to be consistent with CV-SALTS:

The incremental increase in salts from use and treatment must be controlled to the extent that is reasonable, feasible and practicable~~possible~~.

### 3. User Protection

User Protection is a primary goal of CV-SALTS and the Proposed Amendments and therefore in addition to improvements in water quality, should be a reason for justification for modifications, prioritizations and offsets. See CVSC letter.

Pg. 70: Any such modifications should generally be changes that will benefit water quality or user protection in the management zone.

Pg. 107: (paragraph 1)

However, offsets may also be used to incentivize implementation of some large-scale projects such as a regional regulated brine line or establish a mitigation fund to provide safe drinking water, provided that the offsets still result in a positive net effect on receiving water quality or user protection.

### 4. Exceptions

On page 99, CVCWA recommends the revisions below to clarify that a permittee may be in one or both programs, not necessarily both and that exceptions, like variances, are an appropriate tool when a water quality standard should be changed.

The Regional Water Board finds that it is reasonable to grant exceptions to the discharge requirements related to the implementation of water quality objectives for salinity, nitrate and boron for non-NPDES dischargers to surface water, and for discharges to groundwater ~~in order to allow for development and implementation of the SNMPS~~if the permittee is actively participating in the implementation of the long-term Salt and/or Nitrate Control Program and it is either infeasible, impracticable or unreasonable to prohibit the discharge, or it is preferable to have a discharger and/or area specific and time-limited exception rather than a more lasting water quality standard revision, or where a water quality standard should be revised.

Page 101 reads as if mitigation responsibilities may be appropriate for all exceptions, including salt and/or boron. CVCWA recommends this be clarified.

(6) Requirements associated with seeking and approving an exception shall include, but are not limited to: eligibility criteria, mitigation responsibilities (for nitrate), monitoring/reporting obligations, and expectations relevant to implementing the SNMP Management Goals.

## 5. Offsets

Regarding the Offsets Policy, both the Executive Summary and the language of the Proposed Amendments provide that offsets are available when “the combined net effect on receiving water quality is functionally-equivalent to or better than that which would have occurred by requiring the discharger to comply with its [Waste Discharge Requirements] at the point of discharge.” (Proposed Amendments, p. 15.) The phrase “functionally-equivalent to or” should be removed from this sentence and the substantially similar sentence on page 107 because these words create an unattainable constraint in a spatial context, and are unnecessary.

CVCWA recommended the following edit on page 107 so that this paragraph aligns with paragraph 1 on page 107 which recognizes the benefits of regional projects.

Pg 107:

In most cases, a offset project for nitrate or salt discharges should be located within the same groundwater basin/subbasin or management zone as the regulated discharge and is applicable to groundwater only.

Additionally, as discussed in CV-SALTS Executive Policy meetings, offsets should be allowed for the same class of constituents. Pg. 108:

(3) Offsets should be for the same ~~pollutant~~ class of constituents.

## 6. Consideration of Hydrologic Conditions

Hydrologic conditions, i.e. rainfall, are part of an overall salt and/or nitrate balance and should be accounted for, as directed in the Woodland Order and consistent with the Dixon Site Specific Objective and the Lower San Joaquin River salinity objectives archtypes. CVCWA recommends the following modification to Goal 2 on page 201:

The nitrate mass balance will need to account for hydrologic conditions, as well as nitrate taken up by crops and losses of nitrate from the nitrogen cycle in soil, including denitrification in the root zone by soil microbial activity and volatilization to the atmosphere. Current regulatory activities are moving toward this goal through source control activities.

## 7. Fixed Dissolved Solids

Fixed Dissolved Solids (FDS) are appropriate to add to the list of salinity constituents, as another measurement of salinity.

Page 85: SALINITY: For purposes of implementing the Salt and Nitrate Control Plan, the definition of “salinity” and “salt” includes only: electrical conductivity, total dissolved solids, fixed dissolved solids, chloride, sulfate, and sodium.

Page 100: For the purposes of this Program, salinity and its constituents include, and are limited to, the following: electrical conductivity, total dissolved solids, fixed dissolved solids, chloride, sulfate and sodium.

## 8. SMCLs Amendments

On page 16, edit the text in the table on secondary MCLs to reflect that averaging periods are recommended as part of the SMCL objectives, rather than implementation in the Proposed Amendments:

These recommendations include:

- Under Chapter 3 Water Quality Objectives:
  - o Incorporate guidance from Title 22 for utilizing the applicable “Recommended”, “Upper”, or “Short Term” concentrations included in Title 22 tables.
  - o Determine compliance based on annual average of sample results for surface water and appropriate long term averages for groundwater.
- Under Chapter 4 Implementation:
  - o Consider “Recommended” concentrations as goals and allow concentrations ranging to the “Upper” level if it is demonstrated that it is neither reasonable nor feasible to achieve lower levels. “Short Term” level may be authorized on a temporary basis consistent with Title 22 or with the Drought and Conservation Policy.
  - o Provide flexibility to determine compliance with SMCLs using tests other than total for aluminum, color, copper, iron, manganese, silver, turbidity and zinc.
  - o ~~Determine compliance based on annual average of sample results~~

9. On Page 19, the text infers the prioritization is through the basin plan and through the SNMP. The language should be consistent regarding prioritization. CVCWA suggests revise the text for consistency or establish process for prioritizing basins and remove or revising footnote 5.

Again, CVCWA appreciates your leadership and the hard work your staff has done to work with stakeholders to develop the Proposed Amendments. CVCWA appreciates the opportunity to provide these comments on the Proposed Amendments. If you have any questions, or if CVCWA can be of further assistance, please contact me at (530) 268-1338 or [eoofficer@cvcwa.org](mailto:eoofficer@cvcwa.org).

Sincerely,



Debbie Webster,  
Executive Officer

cc: Patrick Pulupa – Executive Officer, CVRWQCB  
Jeanne Chilcott – CVRWQCB  
Anne Littlejohn – CVRWQCB  
Glenn Meeks – CVRWQCB  
Daniel Cozad – CVSC

# **Attachment A**



# Memorandum

DATE: May 7, 2018

TO: Tom Grovhoug

COPY TO: \_\_\_\_\_

**Airy Krich-Brinton**

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SUBJECT: **CVCWA Finished Water Compliance and Data Summary**

## INTRODUCTION

Raw and finished drinking water data from agencies along the Sacramento River and San Joaquin River watersheds and Delta were compiled from the Water Boards website.<sup>1</sup> Data from eighteen counties, 69 water systems, and 175 locations (79 finished water locations) were reviewed, for five parameters with secondary Maximum Contaminant Levels (MCLs): aluminum, iron, manganese, color and odor. From this dataset, the agencies with sufficient data collected from paired raw and treated water locations were selected, shown in Tables 1 and 2. The secondary MCLs are shown in Table 3.

**Table 1. Water Agencies and Monitoring Locations for Metals**

| County      | Water System                 | Monitoring Locations              |                                     |
|-------------|------------------------------|-----------------------------------|-------------------------------------|
|             |                              | Raw Water                         | Finished Water                      |
| Calaveras   | CCWD – Jenny Lind            | Calaveras River                   | Calaveras River                     |
| Sacramento  | Rancho Murieta CSD           | LAKE CHESBRO<br>(CONSUMNES RIVER) | LAKE CHESBRO - WTP #1 - TREATED     |
|             |                              |                                   | LAKE CHESBRO - WTP #2 - TREATED     |
|             |                              |                                   | SAC R WTP - RAW (LAB TAP #01)       |
|             | City of Sacramento Main      |                                   | SAC R WTP - TREATED (LAB TAP #12)   |
| San Joaquin | City of Stockton             | DWSP-DELTA WATER SOURCE-RAW       | DWSP-SWTP-TREATED                   |
|             | Stockton East Water District | CALAVERAS RIVER AT BELLOTA - RAW  | TREATMENT PLANT - FINAL TREATED-SA5 |

<sup>1</sup> <https://sdwis.waterboards.ca.gov/>

| County      | Water System                   | Monitoring Locations                    |                                       |
|-------------|--------------------------------|---|---------------------------------------|
|             |                                | Raw Water                               | Finished Water                        |
| San Joaquin | Mountain House CSD             | STANISLAUS RIVER, END OF PIPELINE - RAW | TREATMENT PLANT - SA4- NO FINAL CHLOR |
|             |                                | BYRON-BETHANY IRRIGATION DIST., RAW     | MOUNTAIN HOUSE - TREATED              |
| Solano      | City of Fairfield              | NBR WTP - NORTH BAY AQUEDUCT - RAW      | NORTH BAY REGIONAL WTP - TREATED      |
|             |                                | NBR WTP - PUTAH SOUTH CANAL - RAW       |                                       |
| Solano      | City of Vacaville              | WATERMAN WTP - PUTAH SOUTH CANAL - RAW  | WATERMAN WTP- FINISHED WATER          |
|             |                                | NBR WTP - NORTH BAY AQUEDUCT - RAW      | NORTH BAY REGIONAL WTP                |
| Solano      | City of Vacaville              | NBR WTP - PUTAH SOUTH CANAL - RAW       | SEASONAL DE WTP                       |
|             |                                | WTP - PUTAH SOUTH CANAL WATER - RAW     |                                       |
| Tuolumne    | TUD - Upper Basin Water System | CF MAIN TUOLUMNE DITCH RAW              | CF MAIN PLANT WTP TREATED             |
|             |                                | MG SOULSBYVILLE DITCH RAW               | MONTE GRANDE WTP TREATED              |
|             |                                | SECTION IV DITCH - RAW                  |                                       |
|             |                                | BRENTWD POND RAW (DITCH OUTAGES ONLY)   | UPPER BASIN WTP - TREATED             |
| Yolo        | City of West Sacramento        | SACRAMENTO RIVER - RAW                  | SACRAMENTO RIVER - TREATED            |

**Table 2. Water Agencies and Monitoring Locations for Color and Odor**

| County      | Water System            | Monitoring Locations                   |                                   |
|-------------|-------------------------|--|-----------------------------------|
|             |                         | Raw Water                              | Finished Water                    |
| Sacramento  | City of Sacramento Main | SAC R WTP - RAW (LAB TAP #01)          | SAC R WTP - TREATED (LAB TAP #12) |
| San Joaquin | City of Stockton        | DWSP-DELTA WATER SOURCE-RAW            | DWSP-SWTP-TREATED                 |
|             | City of Tracy           | DELTA MENDOTA CANAL SOURCE - RAW       | TREATMENT PLANT EFFLUENT          |
| Solano      | City of Benicia         | NORTH BAY AQUEDUCT-RAW @ BENICIA WTP   | BENICIA WTP - TREATED             |
|             |                         | NORTH BAY AQUEDUCT RAW @ BARKER SLOUGH |                                   |
|             |                         | PSC - TERMINAL RESERVOIR - RAW         |                                   |
| Solano      | City of Fairfield       | NBR WTP - NORTH BAY                    | NORTH BAY REGIONAL                |

| County | Water System                  | Monitoring Locations                   |  |
|--------|-------------------------------|--|--|
|        |                               | Raw Water                              | Finished Water                           |
| Solano | Suisun-Solano Water Authority | AQUEDUCT - RAW                         | WTP - TREATED                            |
|        |                               | NBR WTP - PUTAH SOUTH CANAL - RAW      |  |
|        |                               | WATERMAN WTP - PUTAH SOUTH CANAL - RAW | WATERMAN WTP-FINISHED WATER              |
|        |                               | PUTAH SOUTH CANAL MP 19.61             | CEMENT HILL WTP-PUTAH SOUTH CANAL WTR-TR |
| Solano | City of Vacaville             | PUTAH SOUTH CANAL MP 12.84             |  |
|        |                               | PSC TERMINAL RESERVOIR - RAW           |  |
|        |                               | NBR WTP - NORTH BAY AQUEDUCT - RAW     | NORTH BAY REGIONAL WTP                   |
|        |                               | NBR WTP - PUTAH SOUTH CANAL - RAW      | SEASONAL DE WTP                          |
| Yolo   | City of West Sacramento       | WTP - PUTAH SOUTH CANAL WATER - RAW    |  |
|        |                               | SACRAMENTO RIVER - RAW                 | SACRAMENTO RIVER - TREATED               |

**Table 3. Title 22 Secondary MCLs (Table 64449-A)**

|                        | MCL                |
|------------------------|--------------------|
| Aluminum, µg/L         | 1000 (trigger 200) |
| Iron, µg/L             | 300                |
| Manganese, µg/L        | 50                 |
| Color                  | 15                 |
| Odor Threshold, T.O.N. | 3                  |

The compliance rate (finished water quality with the MCLs) of selected treatment plants (those with sufficient data and raw water detects) is shown in Table 4, and the full dataset in Table 5.

**Table 4. Compliance Rate of Selected Treatment Plants (Finished Water versus MCLs)**

| Water Agency                   | Treatment Plant                       | Aluminum | Iron | Manganese | Color | Odor Threshold |
|--------------------------------|---------------------------------------|----------|------|-----------|-------|----------------|
| CCWD - Jenny Lind              | CALAVERAS RIVER                       | -        | -    | 99%       | -     | -              |
| City of Benicia                | BENICIA WTP                           | -        | -    | -         | 100%  | 82%            |
| City of Fairfield              | NORTH BAY REGIONAL WTP                | 100%     | 100% | -         | 100%  | 100%           |
|                                | WATERMAN WTP                          | 100%     | 100% | -         | 99%   | 95%            |
| City of Sacramento Main        | SAC R WTP (LAB TAP #12)               | 100%     | -    | -         | 100%  | 100%           |
| City of Stockton               | DWSP-SWTP                             | -        | 100% | 100%      | 100%  | 97%            |
| City of Tracy                  | TREATMENT PLANT EFFLUENT              | -        | -    | -         | 95%   | 57%            |
| City of Vacaville              | NORTH BAY REGIONAL WTP                | 100%     | 100% | -         | 100%  | 100%           |
|                                | SEASONAL DE WTP                       | 100%     | 100% | -         | 100%  | 89%            |
| City of West Sacramento        | SACRAMENTO RIVER                      | 100%     | 100% | 97%       | 100%  | 85%            |
| Mountain House CSD             | MOUNTAIN HOUSE                        | 100%     | 100% | 100%      | -     | -              |
| Rancho Murieta CSD             | LAKE CHESBRO - WTP #1                 | -        | -    | 100%      | -     | -              |
|                                | LAKE CHESBRO - WTP #2                 | -        | -    | 100%      | -     | -              |
| Stockton East Water District   | TREATMENT PLANT - SA5                 | -        | 100% | 100%      | -     | -              |
|                                | TREATMENT PLANT - SA4-NO FINAL CHLOR  | -        | 100% | 100%      | -     | -              |
| Suisun-Solano Water Authority  | CEMENT HILL WTP-PUTAH SOUTH CANAL WTR | -        | -    | -         | 100%  | 79%            |
| TUD - Upper Basin Water System | CF MAIN PLANT WTP                     | 100%     | 100% | 100%      | -     | -              |
|                                | MONTE GRANDE WTP                      | 100%     | 100% | 100%      | -     | -              |
|                                | UPPER BASIN WTP                       | 100%     | 100% | 100%      | -     | -              |

**Table 5. Compliance Rate of All Treatment Plants (Finished Water versus MCLs)**

| Water Agency                      | Location                        | Color | Odor Threshold | Aluminum | Iron | Manganese |
|-----------------------------------|---------------------------------|-------|----------------|----------|------|-----------|
| Angels, City of                   | CITY OF ANGELS                  | -     | -              | 100%     | 100% | 100%      |
| AWA Buckhorn Plant                | BUCKHORN WTP                    | -     | -              | 100%     | 100% | 100%      |
| AWA, Ione                         | IONE WTP                        | -     | -              | -        | 100% | -         |
| AWA, Sutter Creek                 | TANNER WTP                      | -     | -              | -        | 100% | -         |
| Bass Lake Water Company           | BASS LAKE SWTP/WILLOW CR        | -     | -              | 100%     | 100% | 100%      |
| Bass Lake Water Company           | SCHOOL RD WTP (U & CL)          | -     | -              | 100%     | 100% | 100%      |
| Bella Vista Water District        | SACRAMENTO RIVER @ BVWD WTP     | -     | -              | 100%     | 100% | 100%      |
| Cal Trans Erreca Rest Area        | CALTRANS ERRECA WTP             | -     | -              | 100%     | 100% | 100%      |
| Calaveras PUD                     | TREATED                         | -     | -              | 100%     | 100% | 100%      |
| CCWD - Copper Cove                | TULLOCH RESERVOIR               | -     | -              | 100%     | 100% | 100%      |
| CCWD - Ebbetts Pass               | HUNTERS RESERVOIR               | -     | -              | 100%     | 100% | 100%      |
| CCWD - Jenny Lind                 | CALAVERAS RIVER                 | -     | -              | 100%     | 100% | 99%       |
| CDCR - Sierra Conservation Center | SCC WTP                         | -     | -              | 100%     | 100% | 100%      |
| City of Benicia                   | BENICIA WTP                     | 100%  | 81%            | 100%     | 100% | 100%      |
| City of Fairfield                 | NORTH BAY REGIONAL WTP          | 100%  | 100%           | -        | -    | -         |
| City of Fairfield                 | WATERMAN WTP                    | 99%   | 100%           | -        | -    | -         |
| City of Fairfield                 | NORTH BAY REGIONAL WTP          | -     | -              | 100%     | 100% | 100%      |
| City of Fairfield                 | WATERMAN WTP                    | -     | -              | 100%     | 100% | 100%      |
| City of Lodi                      | SWTF WATER                      | 100%  | 100%           | 100%     | 100% | 100%      |
| City of Redding                   | Sacramento River @ Foothill WTP | -     | -              | 100%     | -    | -         |
| City of Redding                   | Whiskeytown Lake @ Buckeye WTP  | -     | -              | 100%     | -    | -         |
| City of Roseville                 | FOLSOM LAKE                     | -     | -              | 100%     | 100% | 100%      |
| City of Sacramento Main           | AMER R WTP (LAB TAP #08)        | 100%  | 100%           | -        | -    | -         |
| City of Sacramento Main           | SAC R WTP (LAB TAP #12)         | 100%  | 100%           | -        | -    | -         |
| City of Sacramento Main           | AMER R WTP (LAB TAP #08)        | -     | -              | 100%     | 100% | 100%      |
| City of Sacramento Main           | SAC R WTP (LAB TAP #12)         | -     | -              | 100%     | 100% | 100%      |
| City of Stockton                  | DWSP-SWTP                       | 100%  | 97%            | 100%     | 100% | 100%      |

| Water Agency                            | Location                               | Color | Odor Threshold | Aluminum | Iron | Manganese |
|---|--|-------|----------------|----------|------|-----------|
| City of Tracy                           | TREATMENT PLANT EFFLUENT               | 94%   | 50%            | 100%     | 94%  | 100%      |
| City of Vacaville                       | NORTH BAY REGIONAL WTP                 | 100%  | 100%           | -        | -    | -         |
| City of Vacaville                       | SEASONAL DE WTP                        | 100%  | 100%           | -        | -    | -         |
| City of Vacaville                       | NORTH BAY REGIONAL WTP                 | -     | -              | 100%     | 100% | 100%      |
| City of Vacaville                       | SEASONAL DE WTP                        | -     | -              | 100%     | 100% | 100%      |
| City of Vallejo                         | FLEMING HILL WTP                       | -     | -              | 100%     | 100% | 100%      |
| City of Vallejo-Lakes System            | GREEN VALLEY WTP                       | -     | -              | 100%     | 100% | 100%      |
| City of West Sacramento                 | SACRAMENTO RIVER                       | 100%  | 71%            | 100%     | 100% | 97%       |
| City of Yuba City                       | 4 MG CLEARWELL EFFLUENT                | 100%  | 70%            | 100%     | 100% | 100%      |
| Elk Creek Community S.D.                | SURFACE WATER TREATMENT PLANT          | -     | -              | 100%     | 60%  | 20%       |
| Folsom State Prison                     | WATER TREATMENT PLANT                  | 100%  | 100%           | 100%     | 100% | 100%      |
| Folsom, City of - Main                  | FOLSOM LAKE                            | -     | -              | 100%     | 100% | 100%      |
| Foresthill Public Utility Dist          | WTP EFFLUENT                           | -     | -              | 100%     | 100% | 100%      |
| Golden State Water Co. - Cordova        | COLOMA WTP                             | -     | -              | 100%     | -    | 100%      |
| Jackson Valley Irrigation District      | LAKE AMADOR- STANDBY                   | -     | -              | 89%      | -    | -         |
| Lake Don Pedro CSD                      | LAKE DON PEDRO WTP                     | -     | -              | 100%     | 100% | 100%      |
| Little Potato Slough Mutual             | LITTLE POTATO SLOUGH                   | -     | -              | 94%      | 75%  | 100%      |
| Meadow Vista Cwd                        | BOARDMAN CANAL                         | -     | -              | 100%     | 100% | 100%      |
| Modesto Irrigation District             | TERMINAL RESERVOIR EFFLUENT - DIST SYS | -     | -              | 100%     | 100% | 100%      |
| Mountain House Community Services Dist. | MOUNTAIN HOUSE                         | -     | -              | 100%     | 100% | 100%      |
| Nevada ID - North Auburn                | NORTH AUBURN PLANT                     | -     | -              | 100%     | 100% | 100%      |
| North Yuba Water District               | TREATMENT PLANT                        | -     | -              | 100%     | 100% | 67%       |
| Paradise Irrigation District            | TREATMENT PLANT                        | -     | -              | 100%     | 100% | 100%      |
| Pinecrest Permittees Assn               | N FK TUOL/SHEER CK WTP                 | -     | -              | 100%     | 100% | 100%      |
| Placer CWA - Auburn/Bowman              | AUBURN WTP                             | -     | -              | 100%     | 100% | 94%       |
| Placer CWA - Auburn/Bowman              | BOWMAN WTP                             | -     | -              | 100%     | 100% | 100%      |

| Water Agency                          | Location                                 | Color | Odor Threshold | Aluminum | Iron | Manganese |
|---------------------------------------|--|-------|----------------|----------|------|-----------|
| Placer CWA - Colfax                   | COLFAX WTP                               | -     | -              | 100%     | 100% | 100%      |
| Placer CWA - Foothill                 | FOOTHILL WTP                             | -     | -              | 100%     | 100% | 100%      |
| Placer CWA - Foothill                 | SUNSET WTP                               | -     | -              | 100%     | 100% | 100%      |
| Rancho Murieta Community Servi        | LAKE CHESBRO - WTP #1                    | -     | -              | -        | 100% | 100%      |
| Rancho Murieta Community Servi        | LAKE CHESBRO - WTP #2                    | -     | -              | -        | 100% | 100%      |
| San Juan Water District               | HINKLE CLEARWELL                         | -     | -              | 100%     | 100% | 100%      |
| SCWA - Laguna/Vineyard                | BIGHORN WTP                              | -     | -              | 100%     | 100% | 100%      |
| SCWA - Laguna/Vineyard                | DWIGHT RD WTP (OW-T1) STOR. 1            | -     | -              | -        | 100% | 100%      |
| SCWA - Laguna/Vineyard                | FINISHED WATER (POST MANIFOLD)           | -     | -              | 100%     | 100% | 100%      |
| SCWA - Laguna/Vineyard                | LAKESIDE WTP (WF-2) - FINSHD STORAGE TNK | -     | -              | -        | 100% | 100%      |
| SCWA - Laguna/Vineyard                | LAKESIDE WTP (WF-2) - RECLAIM DIS HEADER | -     | -              | -        | 63%  | 88%       |
| South San Joaquin Irrigation District | WOODWARD RESERVOIR                       | -     | -              | 100%     | 100% | 100%      |
| Stockton East Water District          | TREATMENT PLANT - FINAL TREATED-SA5      | -     | -              | 100%     | 100% | 100%      |
| Stockton East Water District          | TREATMENT PLANT - SA4-NO FINAL CHLOR     | -     | -              | -        | 100% | 100%      |
| Suisun-Solano Water Authority         | CEMENT HILL WTP-PUTAH SOUTH CANAL WTR    | 100%  | 81%            | -        | -    | -         |
| Suisun-Solano Water Authority         | CEMENT HILL WTP-PUTAH SOUTH CANAL WTR-TR | -     | -              | 100%     | 100% | 100%      |
| Travis AFB WTP - Vallejo              | TRAVIS WTP                               | -     | -              | 100%     | 100% | 100%      |
| TUD - Columbia Water System           | COLUMBIA DITCH                           | -     | -              | 100%     | 100% | 100%      |
| TUD - Columbia Water System           | COLUMBIA WTP                             | -     | -              | 100%     | 100% | 100%      |
| TUD - Sonora/Jamestown Water System   | MONO VILLAGE FE/MN POST                  | -     | -              | -        | 98%  | 98%       |
| TUD - Sonora/Jamestown Water System   | MONO VILLAGE FE/MN PRE                   | -     | -              | -        | 55%  | 0%        |
| TUD - Sonora/Jamestown Water          | SONORA WTP                               | -     | -              | 100%     | 93%  | 87%       |

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| Water Agency<br>System                     | Location                    | Color | Odor<br>Threshold | Aluminum | Iron | Manganese |
|--|-----------------------------|-------|-------------------|----------|------|-----------|
| TUD - Upper Basin Water System             | CF MAIN PLANT WTP           | -     | -                 | 100%     | 100% | 100%      |
| TUD - Upper Basin Water System             | MONTE GRANDE WTP            | -     | -                 | 100%     | 100% | 100%      |
| TUD - Upper Basin Water System             | UPPER BASIN WTP             | -     | -                 | 100%     | 100% | 100%      |
| Twain Harte Community Services<br>District | TWAIN HARTE WTP             | -     | -                 | -        | 100% | -         |
| Union Public Utility District              | MURPHYS POWERHOUSE          | -     | -                 | 100%     | 100% | -         |
| Weimar Water Company                       | TREATMENT PLANT             | -     | -                 | 100%     | 100% | 100%      |
| Woodland-Davis Clean Water Agency          | SANBORN RESEVOIR - DBP SITE | 100%  | 100%              | 100%     | 100% | 100%      |

Graphs of the average concentrations follow. Non-detected values were set equal to the reporting limit for the purpose of averaging.





