

LATE REVISIONS TO PROPOSED BASIN PLAN LANGUAGE, STAFF REPORT AND RESOLUTION

BASIN PLAN AMENDMENTS TO INCORPORATE A CENTRAL VALLEY-WIDE SALT AND NITRATE CONTROL PROGRAM

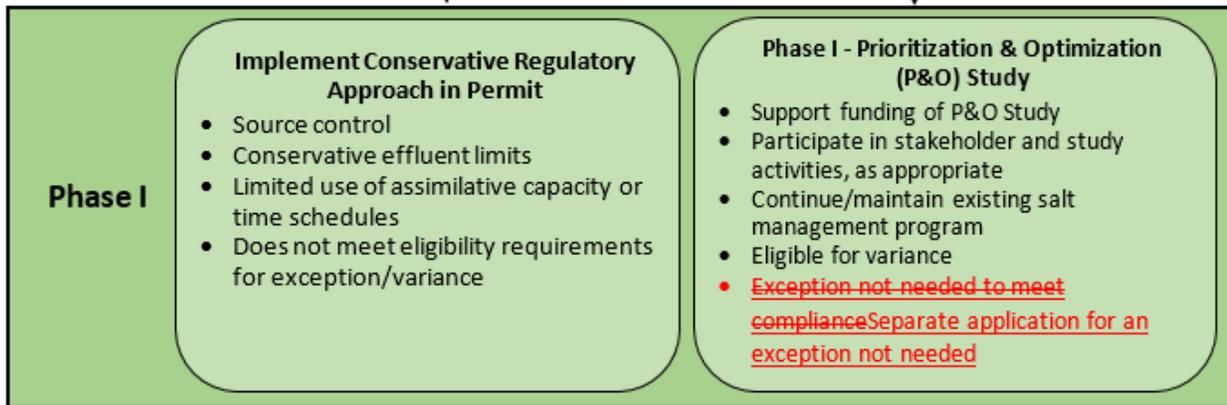
Regional Water Quality Control Board, Central Valley Region

Board Meeting – 31 MAY 2018/ 1 JUNE 2018

1. PROPOSED BASIN PLAN LANGUAGE

REVISIONS TO CHAPTER 4 IMPLEMENTATION FOR THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASIN PLAN AND THE TULARE LAKE BASIN PLAN

Under Phased Control Program heading, revise Figure S-1 Salt Control Program Pathways to Compliance



Under Salt Control Program Implementation heading, revise Table S-1 Comparison Between the Conservative and Alternative Salinity Permitting Approaches During Phase I

NPDES Surface Water Discharge Permittees

- A new or expanded allocation of assimilative capacity 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~~ will be spatially localized or temporally limited, a determination subject to the discretion of the Central Valley Water Board Does not meet eligibility requirements for a variance

Under Phase I Conservative Salinity Permitting Approach, NPDES Surface Water Discharges sub-heading, revise No. 4

4. Allocation of Assimilative Capacity (i.e., mixing zone/dilution credit) – The Central Valley Water Board will limit new or expanded allocations of assimilative capacity in surface water (i.e.,

mixing zone/dilution credit) and will consider whether a permittee can demonstrate that the impact of the discharge is temporary or *de minimis*, such that reduction of water quality will be spatially localized or temporally limited with respect to the waterbody. The 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.

Under Phase I Alternative Salinity Permitting Approach heading, NPDES Surface Water Discharges sub-heading, revise No. 2

2. *Requirements for Ensuring Reasonable Protection of Beneficial Uses*—Full participation in the P&O study as documented and confirmed by the lead entity overseeing the P&O Study shall be found by the Regional Water Board to provide for in lieu or alternative compliance to receiving water limits or effluent limits based on salinity...

Under Central Valley Water Board Actions, Individual Permitting Approach—Path A sub-heading, revise Paragraph 1

The Central Valley Water Board will use the information contained in a submitted Initial Assessment/Notice of Intent or Report of Waste Discharge to determine if the discharge in question complies with the Nitrate Control Program. If the Board finds that ~~that~~ the discharge as currently permitted is in compliance with the Nitrate Control Program, then revisions to existing waste discharge requirements or conditional waivers may not be necessary...

Under Surveillance and Monitoring Program Requirements for the Central Valley Salt and Nitrate Control Program heading, Surface Water Requirements sub-heading, revise Paragraph 1

To assess ambient conditions and trends of salinity and other secondary MCLs in surface waters throughout the Central Valley, the monitoring program for surface waters will rely on data collected by existing Central Valley monitoring and assessment programs already established in the region as well as any additional information collected under the Salt Nitrate Control Program.

Under Definitions and Terminology Specific to the Salt and Nitrate Control Program heading, revise De Minimis Discharge definition

DE MINIMIS DISCHARGE: ~~A discharge that will not cause any significant effect on groundwater quality.~~ *De minimis* discharges of nitrate are specifically defined in the Central Valley Water Board's Nitrate Control Program

Under Definitions and Terminology Specific to the Salt and Nitrate Control Program heading, revise Salt Management Area definition

SALT MANAGEMENT AREA: A defined groundwater basin or sub-basin that ~~that~~ can be used receive and contain water with elevated salinity concentrations in order to remove the salt from sensitive areas until such time that the collected salts can be removed from the area for disposal or use.

Under Application of Secondary Maximum Contaminant Levels to Protect Municipal and Domestic Supply heading, revise Paragraph 3 and 4

Secondary MCLs were intended to protect public welfare for chemical constituents that may adversely affect the taste, odor, appearance or consumer acceptance of drinking water. Secondary MCLs related to salinity are identified in section 64449 (Table B) of Title 22 of the California Code of Regulations (Title 22) and were developed for consumer acceptance. Constituent concentrations ranging to the “Upper” level in Table 64449-B are acceptable if it is demonstrated that it is neither reasonable nor feasible to achieve lower levels...

To implement the SMCLs in the Chemical Constituents section of the surface water and groundwater quality objectives, the Central Valley Water Board ~~shall~~ may consider, as appropriate, a number of site-specific factors when developing WDRs, including, but not limited to those identified in the Staff Report to Incorporate a Salt and Nitrate Control Program into the Central Valley Basin Plans in Section 4.2.10 (Central Valley Water Board, 2018).

2a. STAFF REPORT

REVISIONS TO STAFF REPORT AND APPENDICES FOOTERS

Revised footnotes to be consistent with the Salt and Nitrate Control Program name as follows:

Draft Staff Report

Salt and Nitrate Control Program~~CV-SALTS~~

Page X

REVISIONS TO STAFF REPORT AND APPENDICES

Revise the Staff Report and Appendices to:

Hyphenate: ~~Subbasin~~sub-basin

REVISIONS TO EXECUTIVE SUMMARY, “Surface Water Quality” heading (Page 10)

Tulare Lake Region - Salinity concentrations are elevated in many water bodies but none have been identified as impaired (Provost & Pritchard Consulting Group, 2014).

REVISIONS TO EXECUTIVE SUMMARY, TABLE ES-1, “Conditional Prohibition” (Page 14)

A Conditional Prohibition will apply to all permittees discharging salt and nitrate, except permittees regulated under the Board’s Irrigated Lands Regulatory Program (ILRP) and potentially other General Orders, from the time the permittee receives a Notice to Comply until such time that ~~that~~ the permittees’ existing waste discharge requirements are updated or amended through a public hearing to reflect requirements of the Salt and Nitrate Control Program, including incorporation of any proposed Alternate Compliance Project or Management Zone Implementation Plan...

REVISIONS TO EXECUTIVE SUMMARY, TABLE ES-1, “Exceptions Policy” (Page 15)

The existing Salinity Exceptions Policy that only applies to TDS/EC, chloride, sulfate and sodium, prohibits the Central Valley Water Board from authorizing new exceptions or reauthorizing previously approved exceptions after June 30, 2019. This Salt and Nitrate Control Program recommends revising the existing Exceptions Policy by amending the Basin Plans to (a) add nitrate to the list of chemical constituents for which the Central Valley Water Board may authorize an exception; (b) expand/revise conditions or authorization of an exception to reflect the requirements of the Salt and Nitrate Control Program (no separate application for an exception is needed if meeting Phase I Alternative Salinity Compliance requirements and implementation of an approved alternate nitrate compliance project, respectively); (c) remove the existing sunset provision that prohibits the granting of exceptions beyond June 30, 2019; and (d) delete the current provision limiting the term of an exception to no more than 10 years and add a new provision stating that when authorizing an exception, the Central Valley Water Board shall generally not exceed a term of 10-years but may only exceed 50-years if management practices under the exception are resulting in significant and measurable improvements in water quality. Exception application provisions specific to boron are also included.

REVISIONS TO SECTION 2 TO 8 HEADING NUMBERS

Added numbers for Section 2 to 8 headings to be consistent with the posted March 2018 draft Staff Report.

REVISIONS TO TABLE HEADERS

Linked captions for Tables 2-12 through 2-14, and 3-1, and updated Table of Contents to include aforementioned tables.

REVISIONS TO SECTION 1.0 Introduction, Table 1-1, “Conditional Prohibition” (Page 130)

A Conditional Prohibition will apply to all permittees discharging salt or nitrate, except permittees regulated under the Board’s Irrigated Lands Regulatory Program (ILRP) and potentially other

General Orders, from the time the permittee receives a Notice to Comply until such time that ~~that~~ the permittees' existing waste discharge requirements are updated or amended through a public hearing to reflect requirements of the Salt and Nitrate Control Program, including incorporation of any proposed Alternate Compliance Project or Management Zone Implementation Plan...

REVISIONS TO SECTION 1.0 Introduction, Table 1-1, “Exceptions Policy” (Page 130)

The existing Salinity Exceptions Policy that only applies to TDS/EC, chloride, sulfate and sodium, prohibits the Central Valley Water Board from authorizing new exceptions or reauthorizing previously approved exceptions after June 30, 2019. This Salt and Nitrate Control Program recommends revising the existing Exceptions Policy by amending the Basin Plans to (a) add nitrate to the list of chemical constituents for which the Central Valley Water Board may authorize an exception; (b) expand/revise conditions or authorization of an exception to reflect the requirements of the Salt and Nitrate Control Program (no separate application for an exception is needed if meeting Phase I Alternative Salinity Compliance requirements and implementation of an approved alternate nitrate compliance project, respectively); (c) remove the existing sunset provision that prohibits the granting of exceptions beyond June 30, 2019; and (d) delete the current provision limiting the term of an exception to no more than 10 years and add a new provision stating that when authorizing an exception, the Central Valley Water Board shall generally not exceed a term of 10-years but may only exceed 50-years if management practices under the exception are resulting in significant and measurable improvements in water quality. Exception application provisions specific to boron are also included.

REVISIONS TO SECTION 2.1.2.1 Surface Water Quality (Paragraph 2, Page 145)

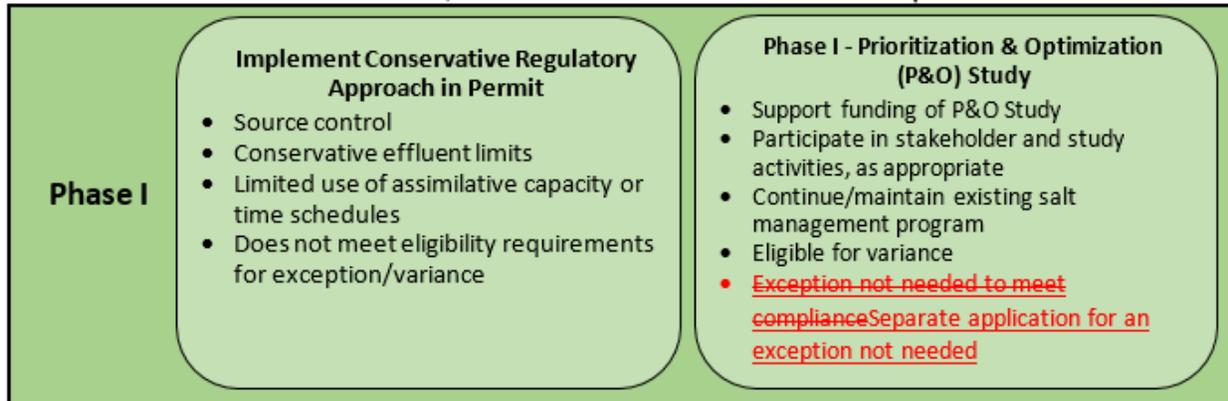
However, irrigation drainage and canals can experience EC levels above 1,000 µmhos/cm (Buena Vista Coalition, 2014; Larry Walker Associates, 2016b). Water bodies on the valley floor of the Tulare Lake Basin are primarily comprised of irrigation and drainage canals.

REVISIONS TO SECTION 4.2.1.1.2.3 Salt Control Program Implementation, Table 4-3, “NPDES Surface Water Discharge Permittees” (Page 201)

NPDES Surface Water Discharge Permittees

- A new or expanded allocation of assimilative capacity 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~~ will be spatially localized or temporally limited, a determination subject to the discretion of the Central Valley Water Board Does not meet eligibility requirements for a variance

REVISIONS TO SECTION 4.2.1.1.2.3 Salt Control Program Implementation, Figure S-1 Salt Control Program Pathways to Compliance (Page 202)



REVISIONS TO SECTION 4.2.1.1.2.3 Salt Control Program Implementation, “NPDES Surface Water Discharges” heading (No. 4, Page 206)

4. Allocation of Assimilative Capacity (i.e., mixing zone/dilution credit) – The Central Valley Water Board will limit new or expanded allocations of assimilative capacity in surface water (i.e., mixing zone/dilution credit) and will consider whether a permittee can demonstrate that the impact of the discharge is temporary or *de minimis*, such that reduction of water quality will be spatially localized or temporally limited with respect to the waterbody. The 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.

REVISIONS TO SECTION 4.2.1.1.2.3 Salt Control Program Implementation (No. 2, Page 208)

Full participation in the P&O study as documented and confirmed by the lead entity overseeing the P&O Study shall be found by the Regional Water Board to provide for in lieu or alternative compliance to receiving water limits or effluent limits based on salinity.

REVISIONS TO SECTION 4.2.2.1.2.4 Nitrate Control Program Implementation, “Individual Permitting Approach—Path A” heading (Paragraph 1, Page 241)

If the Board finds that ~~that~~ the discharge as currently permitted is in compliance with the Nitrate Control Program, then revisions to existing waste discharge requirements or conditional waivers may not be necessary.

REVISIONS TO SECTION 4.2.1.1.2 Alternative to Build Off of Existing Monitoring Programs Utilizing Guidance Developed in through the CV-SALTS Initiative, “Surface Water Requirements” heading (Paragraph 1, Page 264)

To assess ambient conditions and trends of salinity and other secondary MCLs in surface waters throughout the Central Valley, the monitoring program for surface waters will rely to the maximum extent possible on data collected by existing Central Valley monitoring and assessment programs already established in the region. Data collected by existing programs may be supplemented by the collection of additional data by the Salt and Nitrate Control Program. The Work Plan will describe how the entity leading the Salt and Nitrate Surveillance and Monitoring Program will evaluate the following in major water bodies including but not limited to the Sacramento River, Feather River, San Joaquin River and Delta as well as their major tributaries:

REVISIONS TO SECTION 4.2.4.2 Evaluation of Alternatives (Paragraph 6, Page 267)

Limiting Secondary MCL Constituents Assessed: One of the components of the overall Salt and Nitrate Control Program includes clarification of the use of secondary MCL when determining protection of MUN. Amendments are recommended related to the use of ranges for salinity constituents in Table 64449–B as well as the use of annual averaging for all secondary MCLs and the potential to evaluate compliance based on ~~a form other than total concentration for select constituents~~ on using a filtered sample that is then analyzed with the applicable and approved analytical methodology. For metals, this would be total recoverable metals. The current alternative proposes evaluating all secondary MCLs using existing Central Valley monitoring and assessment programs. Options proposed include limiting evaluation to salinity related constituents and limiting evaluation to secondary MCLs that may be impacted by the proposed amendments.

REVISIONS TO SECTION 4.2.10.1.1 No Action (Page 298)

At a minimum, water designated...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, which are incorporated by reference into this plan: Tables 64431–A (Inorganic Chemicals) and 64431–B (Fluoride) of Section 64431, Table 64444–A (Organic Chemicals) of Section 64444, and Tables 64449–A (Secondary Maximum Contaminant Levels–Consumer Acceptance Limits) and 64449–B (Secondary Maximum Contaminant Levels–Ranges) of Section 64449. This incorporation–by–reference is prospective, including future changes to the incorporated provisions as the changes take effect...~~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. To protect all beneficial uses the Central Valley Water Board may apply limits more stringent than MCLs

REVISIONS TO SECTION 4.2.10.2 Evaluation, “SMCLs as Water Quality Objectives” (Bullet 3, Page 305)

Using the “Recommended” concentration of 500 mg/L TDS (900 µS/cm EC) (Table 64449–B) at the point of compliance for the purpose of establishing WDRs makes it nearly impossible to recharge groundwater basins with recycled water unless there is significant assimilative

capacity available in the aquifer because the average TDS concentration in most high quality recycled water is >500 mg/L (900 µS/cm EC). When there is no assimilative capacity available, prior precedential orders by the State Water Board (734-4 & 81-5) require effluent limits no higher than the applicable water quality objective. This complicates and inhibits statewide efforts to promote the use of recycled water for landscape irrigation and to recharge groundwater storage – water management strategies that are particularly important during times of regional or statewide drought.

REVISIONS TO SECTION 4.2.10.2 Evaluation, “Application of SMCLs When Measuring Compliance” (Bullet 2, Page 309)

“Specific Treatment Requirements” – Language for Inland Surface Waters – The existing Chemical Constituents water quality objective for inland surface waters includes the following statement: *“The ~~Regional Water Board~~ Central Valley 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.”*⁹⁵ While the Basin Plans acknowledge that specific treatment requirements are imposed by state and federal drinking water regulations, the Basin Plans provide no implementation provisions for this text. This issue is related to the following regarding appropriate sampling method to measure compliance.

REVISIONS TO SECTION 4.2.10.2 Evaluation, “Application of SMCLs When Measuring Compliance” (Bullet 3, Page 309)

Measuring Compliance with SMCLs – The Basin Plans do not provide guidelines with regard to the appropriate sampling method for evaluating WDR compliance with the SMCLs in Tables 64449–A and 64449–B. Historically, drinking water suppliers and wastewater dischargers have complied with SMCLs using the total recoverable metals in a sample that undergoes no additional filtration after it has been collected. However, drinking water suppliers collect samples after some filtration of its source water occurs either through natural filtration provided by the soil in groundwater or physical filtration treatment or surface water supplies. Wastewater dischargers collect ambient source water samples that have not been filtered. This approach is inconsistent with federal law that requires most community water systems to filter surface water prior to delivery⁹⁶. Per Title 22 and federal regulations, SMCLs are intended to apply to finished water delivered to a community water system after treatment, if treatment is required...

Remove footnote:

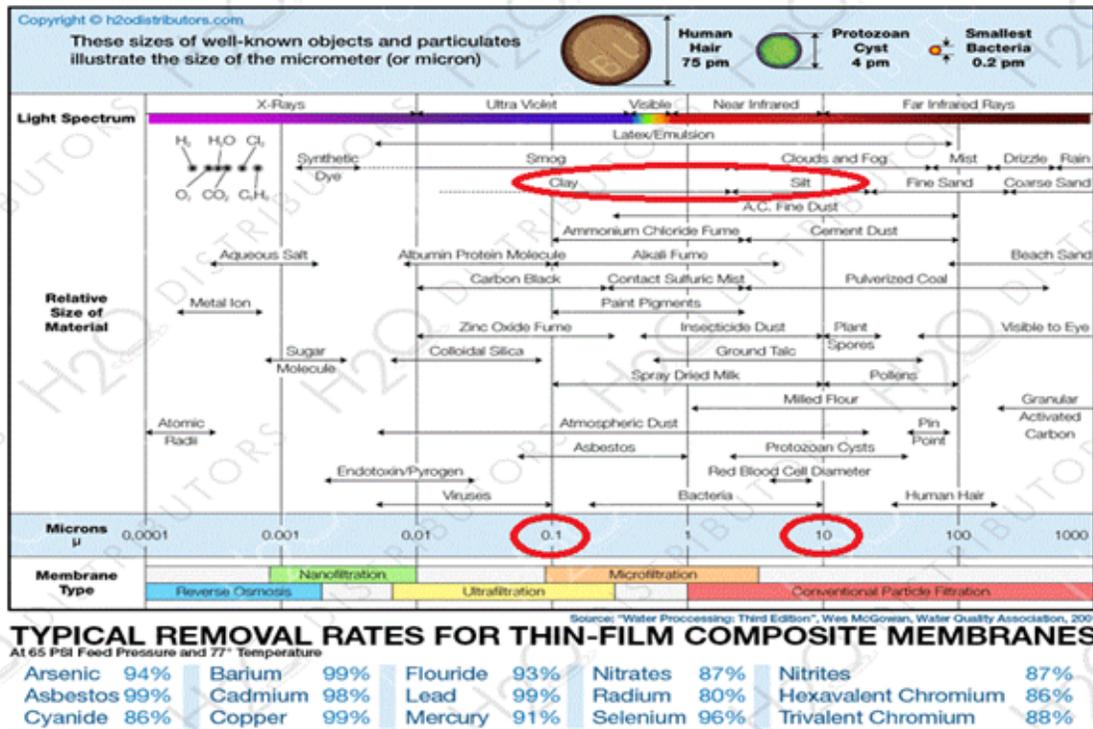
⁹⁶~~40 CFR Part 141, Subparts H, P, T & W~~

REVISIONS TO SECTION 4.2.10.2 Evaluation (Page 310)

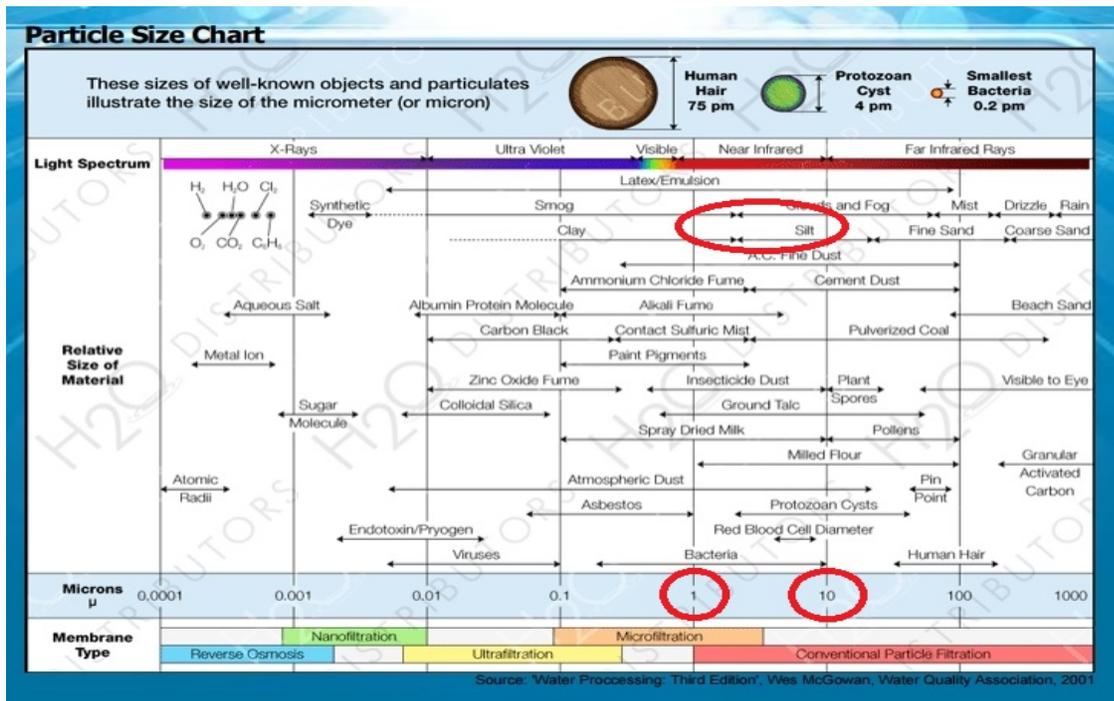
The amount of filtration that source water is subjected to prior to being delivered to the consumer will vary by treatment facility. Figure 4–~~94~~ summarizes approximate corresponding filter size for various treatment processes. Stakeholders representing water purveyors identified a standard range of ~~10-4~~ to 10 microns for typical treatment processes (McGowan, 2001).

REVISIONS TO SECTION 4.2.10.2 Evaluation, Figure 4-9. Range in Particle Size Distribution Under Alternative Filtration Techniques (Page 311)

Removed the following:



Replaced with the following:



REVISIONS TO SECTION 4.2.10.2 Evaluation (Page 313)

The proposed alternative modifies the current Central Valley Water Board staff practice to utilize dissolved measurements of SMCL constituents when determining need for limitations with Waste Discharge Requirements for SMCLs. Dissolved measurements require water samples to be filtered through a 0.45-micron filter prior to analysis. A 0.45-micron filter may not represent the level of filtration utilized by water treatment facilities drawing from the source water (Figure 4-910).

REVISIONS TO SECTION 4.2.10.3 Recommendation (Bullet 5, Page 316)

It may be appropriate to develop guidelines in conjunction with the Division of Drinking Water and affected stakeholders in the future to support the Basin Plans to further describe how the following existing Basin Plan language would be considered when developing WDRs for discharges to inland surface waters: *~~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.*

REVISIONS TO SECTION 5.4 Secondary MCLs (Paragraph 1, Page 337)

Maximum Contaminant Levels (MCLs) are designed to protect public welfare and health by setting standards for drinking water supplied to the public. State and federal drinking water regulations require that most surface waters be filtered and disinfected prior to being served to the public, unless an exemption to filtration requirements has been granted. Secondary MCLs (SMCLs) are designed to protect the aesthetic quality (taste, odor and appearance) of drinking water (i.e. the MUN beneficial use), and are identified in section 64449 (Tables A and B) of Title 22 of the California Code of Regulations (Title 22) and were developed to protect public welfare and consumer acceptance by addressing aesthetic qualities and not intended to address public health¹⁰⁹. The Board prospectively incorporated the primary and secondary MCLs into the Basin Plans' Chemical Constituents water quality objective, but neglected to fully incorporate explanatory language from Title 22. The components of the proposed Basin Plan Amendments that affect SMCLs (SMCL Revisions) would revise the Basin Plans to clarify the intent and use of applying the SMCLs in permitting actions.

REVISIONS TO SECTION 5.4 Secondary MCLs (Paragraph 2, Page 337)

The SMCL Revisions would address two types of SMCLs: those associated with salinity, and those associated with other types of constituents (~~e.g. metals~~) in Table 64449-A of Title 22. For salinity constituents, the proposed revisions would clarify how the Board will apply values within those ranges as water quality objectives, consistent with the intent of Title 22. ~~For metals,~~ The proposed revisions would state that permit limits are to be derived based a on a filtered water sample for SMCLs pertaining to aluminum, color, copper, iron, manganese, silver, turbidity and zinc unless receiving waters in question have been exempted from filtration requirements in the Enhanced Surface Water Treatment Rule (otherwise, compliance with SMCLs is to be evaluated using an unfiltered samples). Both revisions are consistent with the Board's current permitting practices, and thus, degradation is expected to be negligible following the adoption of the SMCL Revisions.

REVISIONS TO SECTION 6.1.1.4 Requirements for Avoiding Wetland Loss (Paragraph 2, Page 343)

The proposed Basin Plan Amendments will not adversely affect or have net loss to current wetlands. The amendments do not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board that would change the landscape and impact wetlands. Therefore, these laws and regulations pertaining to wetland loss are not applicable to the proposed Basin Plan Amendments. Construction of any project for an out-of-valley salinity solution may require wetland mitigation and/or permits under Clean Water Act section 404 and Section 10 of the Rivers and Harbors Act. Any impacts to wetlands will be considered and evaluated when those projects are proposed, or when the Basin Plans are amended once those projects are known.

REVISIONS TO SECTION 6.2.9 Nonpoint Source Management Plan and the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (Bullet 4, Page 350)

An NPS control implementation program shall include feedback mechanisms (~~defined by the Court as adequate monitoring of the effectiveness of management practices~~) so that the Regional Board, dischargers, and the public can determine whether the program is achieving its stated purpose(s).

REVISIONS TO SECTION 6.3.5 Application of Water Quality Objectives Policy (Page 357)

“The numerical and narrative water quality objectives define the least stringent standards that the ~~Central Valley~~Regional Water Boards will apply to regional waters in order to protect beneficial uses.”

REVISIONS TO SECTION 6.3.6 Watershed Policy (Page 357)

“The ~~Central Valley~~Regional Water Board supports implementing a watershed based approach to addressing water quality problems. The State and ~~Central Valley~~Regional Water Boards are in the process of developing a proposal for integrating a watershed approach into the Board's programs. The benefits to implementing a watershed based program would include gaining participation of stakeholders and focusing efforts on the most important problems and those sources contributing most significantly to those problems.”

REVISIONS TO SECTION 9.0 References (Page 404)

Added the following:

Buena Vista Coalition. (2014). Surface Water Monitoring Plan. Retrieved from https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality/coalitions/buena_vista/surface_water/buena_vista_swmp.pdf

REVISIONS TO SECTION 9.0 References (Page 406)

Added the following:

Provost & Pritchard Consulting Group. (2014). Kern River Watershed Coalition Authority Surface Water Monitoring Plan. Retrieved from https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality/coalitions/kern_river/surface_water/2014_0804_kern_swmp.pdf

2b. STAFF REPORT APPENDICES

REVISIONS TO APPENDICES, add:

Added blank pages to the end of Appendices B, C, E, F, J and K to have each Appendix begin on an odd page number when compiled.

REVISION TO FIGURE CAPTIONS IN APPENDIX B

Revised captions for Figures B-6 through B-9 in Appendix B to include sub-basin information.

REVISIONS TO APPENDIX I

See attached Appendix I for all revisions. Primarily clarified existing and added more examples.

REVISIONS TO APPENDIX J

See attached Appendix J for all revisions. Primarily clarified existing and added more examples.

3. RESOLUTION

REVISIONS TO RESOLUTION FINDING NO. 5 (Page 1) revise:

See attached Resolution for all revisions.

ATTACHMENTS

- Appendix I
- Appendix J
- Resolution

APPENDIX I

Summary Salt Control Program with Examples

The Salt Control Program (“Program”) establishes new regulations for the control and permitting of salt discharges to surface water and groundwater. All permitted dischargers (permittees) in the Central Valley Region that discharge salt are subject to this Program, which will be implemented in three phases, each lasting ten to fifteen years.

- Phase I is the Prioritization and Optimization Study (P&O Study), which will facilitate development of a long-term Program that includes identification of salinity control projects for implementation. The Phase I P&O Study will be funded through the collection and administration of fees by the Central Valley Salinity Coalition (CVSC) or other lead entity (the entity may accept technical or other support in lieu of fees);
- Phase II (Project Development and Acquisition of Funds); and,
- Phase III (Project Construction)

Phase II and III will implement the findings from Phases I. The overall approach is summarized in Figure K-1.

During Phase 1 of the Program, a Conditional Prohibition shall apply to all permittees discharging salt pursuant to Board-issued waste discharge requirements and conditional waivers that are not regulated under the Irrigated Lands Regulatory Program (ILRP). The Conditional Prohibition shall apply from the time permittees receive a Notice to Comply from the Central Valley Water Board until such time that permits are updated to reflect the requirements of the Salt Control Program. Permittees regulated under an ~~ILRP~~ILRP General Order will comply with Phase I of the Program as required by the General Order, which will be amended to incorporate the Program.

In general, the timing and nature of the Notice to Comply will depend on whether the permitted discharge is to groundwater or surface water and the type of permit, e.g., if the permittee discharges to surface water under the NPDES Program and is subject to federal requirements. The Notice to Comply will require permittees to select from one of two compliance pathways to comply with the Program:

- *Conservative Permitting Approach* – The permittee will achieve compliance through source control and application of conservative salinity permit limits. The permittee will have limited ability to use assimilative capacity or make use of regulatory tools such as a variance/exception or a compliance or time schedule.
- *Alternative Permitting Approach* – The permittee will achieve compliance by participating in the Phase I P&O Study and continuing implementation of performance based measures and the permittee’s existing salinity management program(s)/best management practices.

Within six months of receiving a Notice to Comply, permittees must submit a Notice of Intent that either provides documentation on how they will meet conservative salinity limits or confirms that they have elected to and are fully participating in the alternative permitting approach (i.e. the P&O Study). Permittees that do not provide the Notice of Intent are subject to enforcement

actions that may include prohibition of discharge. The Notice of Intent must include the necessary supporting documentation as described below for each pathway.

Documentation to Support Selection of the Conservative Permitting Approach

The permittee must submit an assessment of how its discharge to groundwater or surface water will comply with the requirements of this permitting approach. The assessment should include or consider the following:

- Characterization of the discharge to groundwater or surface water for electrical conductivity (measured as $\mu\text{S}/\text{cm}$). Data from at least two years prior to the date of the Notice to Comply should be utilized for the assessment. Historical (within the past 5-7 years) and/or regional data may be used if local and/or current data is not available, and if the data is representative of current discharge and receiving water conditions. Data from a longer period may be necessary if the salinity characteristics of the discharge are highly variable.
- Evaluation of the beneficial use(s) applicable to the receiving water(s) named in the permit. In most situations, this evaluation will require, at a minimum, an evaluation of the MUN and AGR beneficial uses. Unless the receiving water has a site-specific numeric water quality objective that is more stringent, the evaluation should rely on the following numeric values:
 - AGR Beneficial Use - 700 $\mu\text{S}/\text{cm}$ electrical conductivity (EC), as a monthly average
 - MUN Beneficial Use – 900 $\mu\text{S}/\text{cm}$ EC, as an annual average
- Evaluation to determine if the discharge causes or contributes to an exceedance of the applicable numeric values in the receiving water or an overall increase in salinity concentrations in the receiving water.
- Limitations on the authorization of new or expanded allocations of assimilative capacity by the Regional Water Board or the use of other regulatory tools to achieve compliance with water quality objectives or numeric values. Therefore,
 - The assessment should assume that water quality objectives or numeric values shall be met at the point of discharge, that is, without an allocation of assimilative capacity in groundwater or use of a mixing zone in surface water or does not cause or contribute to an exceedance a significant salt increase in the receiving water. If the permittee's existing permit already has an approved allocation of assimilative capacity or mixing zone, supported by a previously accepted antidegradation study or analysis, the Regional Water Board may consider continuing the previously approved assimilative capacity allocation.
 - The use of a time or compliance schedule to come into compliance with water quality objectives or numeric values will be limited.
 - The permittee will not be able to apply for an exception from the implementation of a water quality objective for groundwater or a variance from a surface water quality standard.

Documentation to Support Selection of the Alternative Permitting Approach

Participation in the P&O Study requires the permittee meet the requirements of the Study's lead entity including any minimum level of financial support. Needed level of participation as well as governance procedures and stakeholder participation elements will be established by the lead

entity. The level of participation may vary based on salinity in the discharge, local conditions or other factors. The permittee should contact the lead entity (as identified in the Notice to Comply) to determine the requirements to participate in the P&O Study initially and throughout the duration of Phase I. To respond to the Notice to Comply, the permittee shall submit documentation to the Regional Water Board that the permittee is fully participating in the P&O Study. In addition, throughout the duration of Phase I the permittee shall:

- Continue to contribute support to the P&O Study, as required to remain a participant in the Study; ~~and~~
- Consider actively participating in the ongoing activities of the P&O Study through the opportunities provided, ~~and-~~
- Continue to implement the existing salinity management program/best management practices incorporated into the permit to discharge.

The following examples are intended provide an illustration of how permittees will be responsible for compliance with the Salt Control Program. For all the examples and the Program in general, the selected compliance pathway (conservative or alternative permitting approach) shall remain valid throughout the duration of Phase I of the Program as long as the permittee is in compliance with that permitting approach. Prior to the initiation of Phase II of the Program, the permittee will receive a new NTC that describes permitting options available under Phase II of the Program. Permittees are encouraged to contact the lead entity for the P&O Study soon after receipt of the Notice to Comply to understand their options under the Alternative Permitting Approach.

Some examples are provided below.

Permittees regulated under a WDR/NPDES Permit

Publicly Owned Treatment Works (POTW) - The City of Trees wastewater treatment plant is authorized to discharge treated wastewater to the Merced River. The facility will receive a Notice to Comply with the Program within one year after the surface water components of the Program become effective. The permittee will need to evaluate its existing permit requirements to select the Conservative or Alternative Permitting Approach during Phase I. ~~To assist with this decision, the permittee should review the documentation requirements and numeric guidance values described above. The permittee's selected permitting approach and the required supporting documentation must be submitted to the Regional Water Board within six months of receiving the Notice to Comply.~~

The applicable beneficial uses on the Merced River include MUN and AGR. Using the past five years of data that has been collected as part of the POTW's NPDES permit, the POTW calculates the monthly and annual average EC characteristics of (a) its treated effluent at the point of discharge and (b) the receiving water. The evaluation of the treated effluent shows that the monthly average EC ranges from 475 to 650 $\mu\text{S}/\text{cm}$; the annual average is 500 $\mu\text{S}/\text{cm}$. For the Merced River near the point of discharge, the monthly average EC is ranges from 125 to 350 $\mu\text{S}/\text{cm}$; the annual average is 200 $\mu\text{S}/\text{cm}$. The EC of the treated effluent is less than the AGR and MUN threshold values of 700 $\mu\text{S}/\text{cm}$ and 900 $\mu\text{S}/\text{cm}$, respectively. However, the EC of the treated effluent is higher than the receiving water quality; thus, the discharge will cause some level of degradation in the Merced River and the permittee must be granted use of available assimilative capacity within the river to be considered in compliance. This POTW must be able to demonstrate to the Central Valley Water Board that use of assimilative capacity

within the Merced River provides a better benefit to the people of the State than reducing salt concentrations in the discharge or participating in the alternative salinity permitting approach (i.e. participation in the P&O Study). The permittee submits documentation of the findings from its assessment to the Regional Water Board within six months of receiving the Notice to Comply and provides its Notice of Intent for the Conservative Permitting Approach. In its considerations the Board will evaluate justification for any previous allocation of assimilative capacity as well as overall local and valley-wide salt impacts from the discharge. Should the Board find that granting of assimilative capacity does not provide maximum benefit to the people of the State, then the POTW will either need to implement actions to reduce the EC of its treated effluent (e.g., through implementation of additional source control or treatment) or seek to be permitted under the Alternative Permitting Approach.

Municipal Stormwater Phase I (this example is also applicable to Phase II and Caltrans) – The City of Big Trees is the owner/operator of a large municipal separate storm sewer system (MS4) subject to the Central Valley Region-wide Municipal Stormwater General Permit (Order No. R5-2016-0040, or its replacement). The municipality will receive a Notice to Comply with the Program after the surface water components of the Program specific to NPDES permittees become effective (i.e. after USEPA approval). Upon receipt of the Notice to Comply, the municipality will need to conduct an evaluation to determine if its discharges cause an exceedance of the conservative EC-based salinity values to protect AGR or MUN beneficial uses. To conduct this evaluation, the municipality should, ideally, evaluate local, paired outfall/receiving water data from the past two to five years. However, if that data is not readily available, the municipality may use historical data (within the past 5-7 years) and/or other similar, regional data to conduct the evaluation if the data utilized represents current conditions in the discharge and receiving water. The analysis of dry and wet weather water quality data from the MS4 shows that the EC of the discharge has never exceeded 300 μ S/cm, which is well below the conservative threshold values for protection of the AGR and MUN beneficial uses and of higher quality than the receiving water. The City is able to be permitted under the Conservative Permitting Approach and must provide its Notice of Intent within six months of receiving the Notice to Comply.

In contrast, when the City of Short Hops conducted its analyses, the monthly average EC of the discharge ranged from 400 uS/cm to 900 uS/cm which was above the background receiving water quality of 150 to 350 uS/cm. Similar to the situation with the City of Trees, The City of Short Hops will need to either request an allocation of assimilative capacity or pursue compliance under the Alternative Permitting Approach. Compliance under the Alternative Permitting Approach would require the City to contact the lead entity managing the P&O Study and complete requirements necessary to be documented as fully participating. The City's permit would be amended to incorporate provisions related to the P&O Study and identify that the permittee is in compliance with salinity effluent limits as long as they continue to fully participate in the P&O Study.

Industrial Stormwater - The IndusTree facility is an industrial facility subject to the Statewide Industrial General Permit (Order No. 2014-0057-DWQ, or its replacement). The facility will receive a NTC-Notice to Comply with the Program after the surface water components of the Program become effective. Upon receipt of the Notice to Comply, the facility will need to conduct an evaluation to determine a) if EC is identified as a parameter that is associated with potential industrial pollutant sources at the facility and exposed to stormwater or authorized

Non-Stormwater Discharge; AND b) the facility's discharge causes an exceedance of the conservative EC-based salinity values to protect AGR or MUN beneficial uses. To conduct this evaluation, the facility should, ideally, evaluate data from the facility and/or the receiving water from the past two to five years. However, if that data is not readily available, the facility may use historical data (within the past 5-7 years) and/or other similar, regional data to conduct the evaluation if that data adequately represents current conditions. [See the previous stormwater example for evaluation of effluent related to receiving water.](#)

Permittees regulated under an Individual WDR for discharge to groundwater

Ripe Tomatoes, Inc. is a food processor in Merced County and has a WDR that authorizes the facility to discharge treated effluent to a nearby pasture [owned and operated by Ripe Tomatoes](#). The facility will receive a Notice to Comply with the Program within one year after the groundwater components of the Program become effective [\(i.e. after approval by the Office of Administrative Law\)](#). The permittee will need to evaluate its existing permit requirements to select the Conservative or Alternative Permitting Approach during Phase I. [The facility assesses the quality of the groundwater within its area of contribution to the underlying groundwater sub-basin to determine background EC levels. The assessment must make best efforts to project the area of contribution over a 20-year horizon. The assessment finds that the monthly and annual average EC varies closely around 500 \$\mu\text{S}/\text{cm}\$. The land applied effluent has a monthly average EC of 575 \$\mu\text{S}/\text{cm}\$. Through various processes the EC increases as it percolates to the underlying groundwater and is typically around 800 \$\mu\text{S}/\text{cm}\$ when it enters the groundwater. The treated effluent that enters the groundwater is above the AGR threshold of 700 \$\mu\text{S}/\text{cm}\$ and the facility cannot be permitted under the Conservative Permitting Approach without an allocation of assimilative capacity. The Regional Water Board is limiting new salinity-related allocations of assimilative capacity and may not authorize an allocation. While the facility could potentially upgrade its treatment capabilities to reduce the EC of its treated effluent, the facility may also consider seeking compliance under the Alternative Permitting Approach. To assist with this decision, the permittee should review the documentation requirements described above.](#) The permittee's selected permitting approach and the required supporting documentation must be submitted to the Regional Water Board within six months of receiving the Notice to Comply.

Permittees regulated by a General Order under the Irrigated Lands Regulatory Program

The Regional Water Board will amend ILRP General Orders within 18 months of the effective date of the Program. Following the amendment, the Tulare Lake Basin Area Coalition receives a Notice to Comply with the Salt Control Program. The Coalition will evaluate how its members can best comply with the Program's requirements – either through the Conservative or Alternative Permitting Approach. The Coalition will inform its member of the requirements and work with its members to determine a compliance pathway decision through established Coalition notification processes. Required documentation will be provided to the Regional Water Board within the required deadline demonstrating how the growers in the Coalition will comply with the Program's requirements. If the Coalition selects the Conservative Permitting Approach, the Coalition will work with the growers to implement the salt management practices necessary to ensure compliance with the conservative salinity values [\(see the "Permittees regulated under an individual WDR for discharge to groundwater" example above of the type of analyses required\)](#). If the Coalition selects the Alternative Permitting Approach, it will provide

documentation of full participation in the P&O Study, as determined by the entity leading the P&O Study.

John Apple owns a farm in the Tuolumne River Basin and is a member of the East San Joaquin Water Quality Coalition. As a member of this Third-Party Group, this farm is authorized to discharge to groundwater under the WDRs General Order for Growers Within the Eastern San Joaquin River Watershed. The Regional Water Board will amend this General Order within 18 months of the effective date of the Program. Once the Coalition receives a Notice to Comply, based on the General Order amendment, the Coalition will notify Mr. Apple to inform him of how the Coalition plans to respond to the NTC. Mr. Apple will work directly with the Coalition to support the Coalition's efforts to comply with the Program throughout the duration of Phase I.

Happy Fields, Inc. farms in Yolo County and is not a member of a Third-Party Group under the ILRP Program. Instead, this permittee is authorized to discharge to groundwater under the WDR General Order for Discharges from Irrigated Lands Within the Central Valley Region for Dischargers Not Participating in a Third-Party Group (Order No. R5-2013-0100). The permittee will receive a Notice to Comply with the Program based on the requirements established by the amendment to the ILRP General Orders. After receiving the Notice to Comply, the permittee will need to evaluate the amended General Order requirements to select either the Conservative Permitting Approach by providing documentation to show that conservative salinity values are being met or select the Alternative Permitting Approach by providing documentation of full participation in the P&O Study. See above example for type of analyses required for permittees discharging to groundwater. ~~To assist with this decision, the permittee should review the documentation requirements described above.~~ The permittee's selected permitting approach (conservative or alternative permitting approach) and the required supporting documentation must be submitted to the Regional Water Board within six months of receiving the Notice to Comply.

APPENDIX J

Implementation of the Recommended Alternative for the Nitrate Control Program

The Recommended Alternative for the Nitrate Control Program (Recommended Nitrate Control Program) establishes a comprehensive, long-term management strategy for addressing nitrate in Central Valley groundwater basins/sub-basins and in areas within the Central Valley Water Board's jurisdictional boundaries that are not in a designated groundwater basin/sub-basin. To implement this long-term strategy, the Central Valley Water Board needs additional flexibility in how it permits persons¹ that discharge nitrate to groundwater. Under the Recommended Nitrate Control Program, the Central Valley Water Board may utilize alternative permitting approaches as long as certain requirements are met. These requirements include the need to make sure that those relying on groundwater as a source of drinking water have access to safe drinking water. In other words, where there are public or domestic drinking water wells with water that exceeds the nitrate drinking water standard of 10 milligrams/liter (mg/l), they must have access to drinking water that complies with the nitrate drinking water standard.

The purpose of this appendix is to further explain implementation of the Recommended Nitrate Control Program, including the alternative permitting approaches, as it applies to permitted discharges of nitrate to groundwater that are subject to the Central Valley Water Board's authorities under the Porter-Cologne Water Quality Control Act (Porter-Cologne).

Timing for Implementation

Timing for implementation of the Recommended Nitrate Control Program will vary across the Central Valley based on concerns related to nitrate in groundwater. Specifically, the Recommended Nitrate Control Program includes identification of priority areas that are considered to be of the highest priorities based on existing, ambient water quality conditions. Application of the Recommended Nitrate Control Program to permittees would occur once a permittee is notified by the Central Valley Water Board of their need to comply with the Recommended Nitrate Control Program based on the established priority order. This notification is referred to as a "Notice to Comply."

Existing Dischargers

Once a permittee receives a Notice to Comply, the permittee has a certain amount of time to notify the Central Valley Water Board of their intent to either comply with the Nitrate Control Program as an individual discharger/third party (hereafter referred to as "Individual Permittee"), or as part of a groundwater management zone (hereafter referred to as "Management Zone Participant").² For Priority 1 areas, the time allowed for notification back to

¹ "Person" includes any city, county, district, the state and the United States, to the extent authorized by federal law." (California Water Code, Section 13050(c).)

² For purposes of this notification, individual dischargers that are subject to General Orders that cover a specified geographic area or are commodity based, and that are administered by a Third Party (e.g., Third Party Orders for Irrigated Agriculture), the Third Party may provide notice as required in this step on behalf of its members. For individual dischargers that are subject to a General Order that is not administered by a Third Party (e.g., Dairy General Order), the individual must provide the necessary notice as indicated in this step.

the Central Valley Water Board is 330 days from receiving the Notice to Comply, and for all others it is 425 days after receiving the Notice to Comply. Additional details regarding notification to the Central Valley Water Board are provided below.

New or Expanding Dischargers

For new or expanding permittees located in a groundwater basin/sub-basin (regardless of priority), or those with a material change to their operation that increases the level of nitrate discharged to groundwater, the Central Valley Water Board will require compliance with the Nitrate Control Program at the time of permit issuance, or at the time of permit modification. This provision does not apply to new or expanding permittees in areas that are not part of a designated basin/sub-basin unless the Executive Officer of the Central Valley Water Board determines that based on the specific facts of the discharge that such compliance is required and notifies the discharger accordingly.

Permitting Options

The Recommended Nitrate Control Program includes two separate approaches for permitting nitrate discharges to groundwater:

- 1) *Individual Approach (Path A)* is the standard permitting approach when an individual discharger (or third party group subject to a general order wishing to proceed under Path A) decides to comply with the nitrate components of the Nitrate Control Program as an Individual Permittee, or in circumstances when a management zone is not an option; and,
- 2) *Management Zone Approach (Path B)* is an alternative permitting approach when multiple dischargers/permittees elect to participate in a management zone to comply with the Recommended Nitrate Control Program.

Process for Notification to the Central Valley Water Board

With two permitting options being available, it is necessary for permittees to notify the Central Valley Water Board of their selected pathway (Path A or Path B). Prior to notifying the Central Valley Water Board of their selected permitting pathway, permittees must:

- 1) Conduct an initial assessment of their discharge(s) and groundwater conditions in the vicinity of the discharge(s); *or*,
- 2) Participate in development of a Preliminary Management Zone Proposal with other permittees.

By conducting an initial assessment, permittees will be better informed to determine if they prefer to comply with the Recommended Nitrate Control Program pursuant to Path A or Path B. Or, in the alternative, some permittees may know early on based on their circumstances that development and participation in a Management Zone (i.e., Path B) is their preferred option. In such cases, permittees may decide that is more efficient and advantageous to work with other permittees to develop a Preliminary Management Zone Proposal rather than spending time and resources on an initial assessment.

Under the Recommended Nitrate Control Program, it is anticipated that key permittees in high priority areas will take the lead in developing Preliminary Management Zone Proposals, which will then be made available to others for 60-days for review and consideration. For those permittees that are not actively participating in the development of a Preliminary Management Zone Proposal, they will have the opportunity to join an available management zone. Notice

and information regarding available Preliminary Management Zone Proposals will be posted on the Central Valley Water Board's website, and all reasonable efforts will be made to notify permittees of the availability of such proposals.

For Priority I areas, Preliminary Management Zone Proposals need to be submitted to the Central Valley Water Board within 270 days of receiving a Notice to Comply, and for all other areas they need to be submitted within 1 year of receiving a Notice to Comply. Permittee notification to the Central Valley Water Board regarding which permitting path a permittee intends to elect must then occur 60 days afterwards, or 330 and 425 days respectively, after receiving a Notice to Comply.

Path A Notification

For permittees electing Path A, their notification to the Central Valley Water Board must include the initial assessment as outlined in section x of the Recommended Nitrate Control Program (which is explained below), and a Notice of Intent. The Notice of Intent needs to convey to the Central Valley Water Board the permittees election for Path A compliance.

Path B Notification

For permittees electing Path B, their notification to the Central Valley Water Board needs to consist of a Notice of Intent to comply via Path B, and identification of the Management Zone in which they intend to join. As indicated previously, for those permittees actively participating in development of the Preliminary Management Zone Proposal, submittal of the Preliminary Management Zone Proposal with their names identified constitutes submittal of a Notice of Intent.

For new permittees, or those seeking an expansion related to the discharge of nitrate, they must provide the Central Valley Water Board with the same data and information that is otherwise required by existing permitted dischargers as part of an initial assessment at the time that they submit their discharge application (i.e., Report of Waste Discharge) to the Central Valley Water Board. Such permittees may have the option to join a Management Zone if one is in existence for their area.

Path A Permittees - Initial Assessment and Categorization of the Discharge

A key step in implementation of the Recommended Nitrate Control Program is preparation of an initial assessment by all permittees, except those that actively participate in development of a Preliminary Management Zone Proposal (See Path B). The initial assessment serves several purposes. First, it assists the permittee in evaluating the impact of their discharge of nitrate to groundwater to better determine which permitting pathway works best for their discharge scenario. Second, for those permittees that then elect Path A, it provides the Central Valley Water Board with critical information to categorize the impact of nitrate being discharged to groundwater, and to determine nitrate permitting conditions for the discharge in question. Notably, unless a permittee is actively participating in development of a Preliminary Management Zone Proposal, the permittee needs to conduct an initial assessment. However, only those permittees selecting Path A are obligated to submit the initial assessment to the Central Valley Water Board with their Notice of Intent.

Initial Assessment

In general, the initial assessment is designed to have permittees assess their nitrate discharge impacts to groundwater in the Shallow Zone underlying the area of the discharge. The essential components of an initial assessment are explained here.

Part 1 – Assess Water Quality Conditions in the Shallow Zone

First, all permittees (unless actively participating in development of a Preliminary Management Zone Proposal) need to estimate the impact of nitrate in their discharge on groundwater in the Shallow Zone over a 20-year planning horizon. The Recommended Nitrate Control Program includes options for defining the Shallow Zone as applicable to the discharge (or discharges). In general, however, the Shallow Zone is the portion of the aquifer whose areal extent is defined by the boundaries of the discharge area and whose vertical extent is defined by the depth of the shallowest 10% of the domestic water supply wells near the discharge. Or, alternatively, a permittee may propose an equivalent alternative for approval by the Central Valley Water Board's Executive Officer.

Further, when evaluating such impacts, permittees should be looking to determine the impact of their nitrate discharges on average nitrate concentrations in the Shallow Zone. In its simplest form, permittees may conduct such assessments by using simple mass balance calculations that assume 20 years of nitrate loading as it reaches the water table, and by using readily available data and information. Or, in the alternative, permittees may collect data and information, to model their nitrate discharge impacts on groundwater in the applicable Shallow Zone.

The Recommended Nitrate Control Program does not require permittees to develop expensive, high resolution models. However, a permittee maintains the option to conduct a more sophisticated analysis should they so desire. Further, permittees are encouraged to use existing assessments that may already exist. For example, irrigated lands coalitions in the Central Valley prepared extensive Groundwater Assessment Reports as part of Waste Discharge Requirements issued in 2012 and 2013. Such assessments may already contain the information identified for an initial assessment. Or, in another example, a permittee may have prepared an antidegradation analysis to support issuance of a permit or permit amendment. This antidegradation analysis may satisfy all or part of the initial assessment requirements in the Recommended Nitrate Control Program.

Part 2 – Determine if Discharge of Nitrate is Causing Any Public Water Supply Well or Domestic Well to Exceed the Nitrate Drinking Water Standard

Permittees must conduct a survey of the area where the discharge (or discharges) occurs to identify if there are public water supply or domestic wells that have nitrate levels in exceedance of the drinking water standard, and determine if their discharge (or discharges) are the cause of the nitrate exceedance in the drinking water well in question. To identify drinking water wells that may exceed the nitrate drinking water standard, permittees may use google earth to identify location of domestic wells, the State Water Board's GeoTracker database, State Water Board Division of Drinking Water information, local County Public Health Department information, and other data sources.

Part 3 – Develop Early Action Plan (based on conclusions in Part 2)

If a permittee has determined that it has caused a public water supply well or domestic well to exceed the nitrate drinking water standard, then the permittee must prepare and submit an Early Action Plan with its initial assessment and Notice of Intent to the Central Valley Water Board. The Early Action Plan must include specific actions and a schedule of implementation to address immediate needs of those drinking groundwater that exceeds the drinking water standard for nitrate that is caused by the permittee. The permittee is required to implement the Early Action Plan as soon as reasonably feasible, but no later than 60 days after submittal.

Part 4 - Categorize the Discharge

To assist the Central Valley Water Board in determining appropriate permit requirements and conditions for discharges of nitrate, the Recommended Nitrate Control Program requires the permittee to categorize its impact for nitrate in the Shallow Zone. The Recommended Nitrate Control Program identifies five (5) categories. Categories one (1) through three (3) represent permitted discharges of nitrate that generally will have minimal or limited impacts to nitrate levels in the Shallow Zone. Discharges that fall within categories four (4) and five (5), likely impact nitrate levels in the Shallow Zone more significantly.

Typically, discharges that have more significant impacts on groundwater are subject to more restrictive permit requirements that are costly, and in some cases, unreasonable, infeasible and/or impractical to implement. However, rather than forcing permittees to meet a conservative discharge limit or prohibiting the discharge of nitrate, the Recommended Nitrate Control Program provides the Central Valley Water Board with the authority to adopt (on a permit-by-permit basis under Path A) an alternative permitting approach that would allow the nitrate discharge to continue, as long as certain requirements are met. In short, these requirements include the need to make sure that those that rely on groundwater have access to safe drinking water that complies with the nitrate drinking water standard, and that there are long-term plans for restoring impacted groundwater in the Shallow Zone in question through various management actions.

When the Central Valley Water Board implements an alternative permitting approach, or otherwise permits a nitrate discharge that under typical circumstances would not be permitted, the Central Valley Water Board will require the permittee to implement an Alternative Compliance Project as part of exercising an alternative permitting approach. This use/applicability of this authority is explained below with respect to each category of discharge, as well as in the Examples provided at the end of this Appendix.

An explanation of each category is provided here:

- Category 1 – Under category 1, the nitrate discharge as it reaches the Shallow Zone must be better than the applicable nitrate water quality objective (e.g., <10 mg/L-N), and be better than the average nitrate concentration in the Shallow Zone. Notably, under this scenario, the average nitrate concentration in the Shallow Zone may be less than, equal to, or greater than the applicable water quality standard. However, since the discharge itself is less than the objective, and less than the average concentration in the Shallow Zone, it will improve water quality conditions. Ultimately, this category is titled the “No Degradation” category because the discharge does not cause degradation to nitrate ambient water quality conditions in the Shallow Zone. As such, nitrate discharges in this

category are considered to not impact nitrate levels in groundwater, and such discharges comply with the Recommended Nitrate Control Program with no further actions. Under this scenario, the Central Valley Water Board does not need to rely on alternative permitting authorities. Thus, an Alternative Compliance Project is not necessary.

- Category 2 – Discharges of nitrate that fall under category 2 are those that are considered *de minimis*. Meaning that such discharges in combination with other nitrate discharges to the same Shallow Zone will not cause the average concentration of nitrate in the Shallow Zone to exceed a nitrate trigger of 75% of the applicable water quality objective. Under this scenario, the nitrate discharge itself may be above the applicable water quality objective (e.g., >10 mg/L-N) but the discharge will use less than 10% of available assimilative capacity, *and*, the discharge along with other discharges of nitrate to the Shallow Zone (over a 20-year planning horizon) will not cause the Shallow Zone to exceed 75% of the applicable water quality objective.

When a permittee seeks to use assimilative capacity, even if the amount is *de minimis*, it must be supported with an antidegradation analysis. Such analysis needs to be part of the initial assessment, unless the Central Valley Water Board previously granted the use and if the previously granted use of assimilative capacity was supported with an antidegradation analysis.

In general, the purpose of Category 2 is to recognize that there are some nitrate discharges that are truly *de minimis*, and have little impact on groundwater quality in the Shallow Zone. In such instances, the Central Valley Water Board will likely find that the discharge or discharges in question comply with the Recommended Nitrate Control Program with no further actions necessary. In other words, an Alternative Compliance Project will not be necessary. However, some form of groundwater monitoring may be required to continue to monitor nitrate impacts on the Shallow Zone. In most cases, existing monitoring requirements are probably sufficient for this purpose.

- Category 3 – Category 3 applies to discharges that may be greater than the applicable water quality objective (>10 mg/L-N), and when the impact of these discharges of nitrate are more than *de minimis* (i.e., use more than 10% of available assimilative capacity). Further, to fall within Category 3, the discharge or discharges in question cannot cause the average nitrate concentration in the Shallow Zone to exceed 75% of the applicable water quality objective over a 20-year planning horizon.

As with Category 2 discharges, use of assimilative capacity must be supported with an antidegradation analysis. Such analysis needs to be part of the initial assessment, unless the Central Valley Water Board previously granted the use and if the previously granted use of assimilative capacity was supported with an antidegradation analysis.

Discharges that fall within Category 3 will generally be determined by the Central Valley Water Board to be consistent with the Recommended Nitrate Control Program, and alternative permitting approaches do not need to be employed. With respect to further actions, permittees will likely be required to conduct additional monitoring to ensure that the trigger level of 75% of the applicable water quality objective is not being exceeded.

- Category 4 – Discharges categorized under this Category are those where the average concentration of nitrate in the Shallow Zone is better than the applicable water quality objective (e.g., < 10 mg/L-N), but it is reasonably anticipated that discharge will cause the average nitrate concentration in the Shallow Zone to exceed the 75% trigger but not the applicable water quality objective over the 20 year planning horizon (e.g., Shallow Zone will be between 7.5 mg/L and 10 mg/L in 20 years).

Discharges that fall within Category 4 must be supported with an antidegradation analysis. Such analysis needs to be part of the initial assessment, unless the Central Valley Water Board previously granted the use and if the previously granted use of assimilative capacity was supported with an antidegradation analysis.

Authorizing use of assimilative capacity above the trigger level under the Recommended Nitrate Control Program will trigger the need for an Alternative Compliance Project. Although technically the Central Valley Water Board has the existing legal authority to authorize use of assimilative capacity up to the applicable water quality objective, the Recommended Nitrate Control Program includes triggers to provide for a margin of safety in protecting water quality. By allowing a discharge to encroach into this margin of safety, the Recommended Nitrate Control Program finds it appropriate for there to be an Alternative Compliance Project that accompanies any such request for use of assimilative capacity. The requirements for an Alternative Compliance Project are discussed further in Part 5.

- Category 5 – If a nitrate discharge exceeds the applicable water quality objective (e.g., > 10mg/L-N) as it reaches the Shallow Zone and the Shallow Zone has no assimilative capacity, or if the discharge causes the Shallow Zone to exceed the applicable water quality, then the Central Valley Water Board must grant an Exception to permit the discharge.

The granting of an Exception is an alternative permitting approach that must be accompanied with an Alternative Compliance Project. To obtain an Exception, the nitrate discharger must submit an application that meets the requirements as set forth in the Exceptions Policy.

Part 5 – Propose Alternative Compliance Project

For permittees under Path A that seek the use of assimilative capacity above the trigger level (i.e., Category 4), or need an Exception, the initial assessment must include a proposal for an Alternative Compliance Project. At a minimum, an Alternative Compliance Project must include the following:

- (1) Identification of public water supply and domestic wells that are contaminated by nitrate and that are in the discharge areas zone of concern;
- (2) A schedule, with identified milestones for addressing those nitrate-related drinking water issues; and,
- (3) Identification of steps that will be taken to meet the management goals of the Salt and Nitrate Management program, which may be phased in over time.

The Central Valley Water Board has developed *Guidelines for Developing Alternative Compliance Projects*, which may be used by permittees as they develop their Alternative Compliance Project.

Path B Permittees – Preparation and Participation in a Management Zone

The Recommended Nitrate Control Program includes an alternative permitting approach for that allows permittees to work collectively in a Management Zone. The first step in developing a Management Zone is development and submission of a Preliminary Management Zone Proposal to the Central Valley Water Board according to the requirements and timeline specified in the Recommended Nitrate Control Program. The purpose for preparing a Preliminary Management Zone Proposal is to provide all permittees within the specified area for that management zone with enough information to make an election for complying Recommended Nitrate Control Program via Path A (as an individual permittee/third party group), or via Path B (participant in a management zone).

Upon receiving a Preliminary Management Zone Proposal, Central Valley Water Board staff will make the proposal available on the Board's website and will review the proposal for consistency with the Recommended Nitrate Control Program and provide feedback to the initiating permittees. From the feedback received, the initiating permittees, and additional permittees that have decided to join the Management Zone, will work cooperatively to develop a Final Management Zone Proposal. In its development of the Preliminary Proposal as well as the Final Proposal, permittees are required to seek out input and cooperation from other stakeholders in developing the Management Zone from a governance structure, and in developing the Management Zone Implementation Plan. As detailed in the Recommended Nitrate Control Program, the Management Zone Implementation Plan must address nitrate drinking water issues within the Management Zone as well as include a plan that addresses nitrate in groundwater over the long-term. For example, the long-term plan may include, but is not limited to, management practices identified by irrigated agricultural coalitions through the Management Practices Effectiveness Program that growers will need to implement to address nitrate loading to groundwater. It may also include groundwater recharge projects in coordination with groundwater sustainability agency efforts, and other long-term efforts that are designed to address nitrate levels in groundwater over many years.

Because Management Zones are designed to address nitrate in groundwater from a long-term, comprehensive stand point, the Central Valley Water Board has additional flexibility for permitting discharges of nitrate to groundwater. This includes allocating assimilative capacity to permittees participating in the Management Zone based on a volume-weighted average in the Upper Zone, or by granting an Exception to all permittees in the Management Zone. Further, the comprehensive Management Zone Implementation Plan is the equivalent of an Alternative Compliance Project. Under a Management Zone approach, participating permittees are not required to submit individual applications for an Exception, or an initial assessment. Rather, the Management Zone submittals are designed to provide the necessary information for permittee participants.

Once a Management Zone Implementation Plan is submitted to the Central Valley Water Board, the Central Valley Water Board will amend permits for the participating permittees within the Management Zone. The revised permits would incorporate requirements for implementing the Management Zone Implementation Plan, and would allow for nitrate discharges to groundwater either through the use of volume-weighted assimilative capacity or

through granting of an Exception. Such permit amendments, and the Management Zone Implementation Plan, will be subject to notice, comment and hearing before the Central Valley Water Board.

Examples of Various Permitting Scenarios

Publicly Owned Treatment Works/Point Source Industrial Discharge

POTW A is located in a high priority basin for nitrate and receives a Notice to Comply from the Central Valley Water Board on July 1, 2019. POTW A's effluent has an average nitrate concentration of 12 mg/L-N, and POTW A applies the treated effluent to alfalfa fields owned and operated by POTW A. After receiving the Notice to Comply, POTW A decides that it does not want to participate in a Management Zone but would rather continue to be an individual permittee under Path A. Accordingly, POTW A conducts an initial assessment.

In conducting the initial assessment, POTW A evaluates existing groundwater data to determine background levels for nitrate in the Shallow Zone, and finds that the average nitrate concentration in the Shallow Zone is 8 mg/L-N. Also through its initial assessment, POTW A determines that after plant uptake, the reasonable, average amount of nitrate that enters the Shallow Zone is 6 mg/L-N. Under this scenario, because the discharge as it enters the Shallow Zone is below the water quality objective of 10 mg/L, and less than the average nitrate concentration in the Shallow Zone (8 mg/L-N), the discharge does not cause degradation. As a result, POTW A will indicate in its initial assessment that the discharge falls within Category 1. Further, POTW A finds that its discharge of 6 mg/L-N as it enters the Shallow Zone is not causing any domestic or public supply well to exceed the nitrate drinking water standard of 10 mg/L, and no Early Action Plan is necessary. Here, in this example, no special consideration is necessary because the discharge complies with the applicable water quality objective, does not impact the applicable beneficial use, and does not cause water quality degradation. Similarly, where the discharge has a nitrate concentration of 10 mg/L or less as it enters the Shallow Zone, and where the underlying Shallow Groundwater is above 10 mg/L, the discharge is not causing degradation because it is equal to or better than the water quality objective and it is better than the ambient condition in the Shallow Groundwater Zone.

At the other end of the spectrum, POTW A finds in its initial assessment that it discharges to a Shallow Zone where the average nitrate concentration exceeds the applicable water quality objective ($> 10\text{mg/L-N}$), and the discharge as it reaches the Shallow Zone also exceeds the objective (e.g., $> 10\text{mg/L-N}$). Further, across the road and down gradient from POTW A is a domestic drinking water well, and nitrate in the domestic well exceeds the nitrate drinking water standard of 10 mg/L-N. In this example, POTW A is in an area where no Management Zone has formed, thus joining a Management Zone is not an option. Accordingly, POTW A will need to either decide to upgrade its treatment process to lower nitrate levels in the effluent as it reaches the Shallow Zone, or apply for an Exception pursuant to the Exceptions Policy. For the Central Valley Water Board to grant an Exception, the permittee will need to submit an application that meets the requirements of the Exception Policy and propose an Alternative

Compliance Project. Also, POTW A will need to prepare an Early Action Plan that identifies how it intends to work with the owner/user of the domestic well to ensure that the user of groundwater has compliant drinking water. Options for POTW A to consider may include: providing assistance to dig a deeper well, installing a Point of Use Treatment device in the home, providing assistance for the domestic well to connect to a nearby public water supply, or, as an interim step, provide bottled water.

For the other three categories in between, the level of degradation to the Shallow Zone is the deciding factor with respect to the need for and level of additional actions that may be imposed by the Central Valley Water Board under the Recommended Nitrate Control Program. As explained previously, minimal or limited degradation may require some additional level of monitoring, depending on the amount of degradation. For degradation above the trigger level, an Alternative Compliance Project will need to be proposed and implemented.

Based on its findings in the initial assessment, POTW A decides to remain under Path A even though a Management Zone has formed for its area. POTW A must then submit its initial assessment, Notice of Intent and Early Action Plan (if applicable) to the Central Valley Water Board no later than May 27, 2020. Sixty days later, POTW A must start implementing the applicable Early Action Plan. The Central Valley Water Board will review POTW A's initial assessment and determine if permit revisions are necessary as compared to POTW A's existing permit. If changes to POTW A's permit are necessary, the Central Valley Water Board will amend POTW A's permit according to applicable amendment procedures, which includes notice, public comment, and hearing before the Central Valley Water Board.

Irrigated Lands – Third Party Programs

EXAMPLE 1 – PATH A

Irrigated lands Coalition A is a commodity specific coalition that is subject to General Waste Discharge Requirements (Coalition General Order) issued by the Central Valley Water Board. The commodity members subject to the Coalition General Order grow the specified commodity in areas that are largely considered to be non-priority basins. Thus, Notices to Comply may not be issued in the near future. However, let's assume that Notices to Comply have been issued, or that Coalition A has decided to determine compliance with the Nitrate Control Program prior to receiving any Notices to Comply.

As with any other permittee, Coalition A must select a permitting option pathway for the areas covered by the Coalition General Order. In this example, because the commodity is largely grown in non-priority areas, Coalition A has decided to follow the Individual Approach (i.e., Path A) rather than the Management Zone Approach for the entirety of the areas covered by the Coalition General Order. This means that Coalition A must conduct an initial assessment of groundwater conditions for the commodity specific areas covered by its Coalition General Order, categorize discharges for its members and determine if discharges from its members are causing nitrate concentrations to exceed 10 mg/L nitrate as nitrogen in groundwater utilized as a drinking water source. Notably, it is not expected, anticipated, or practical for Coalition A to categorize discharges on a member-by-member basis, or on a field-by-field basis. Rather, Coalition A is to take reasonable efforts to categorize the various geographic areas that are covered by the Coalition General Order.

As part of the Coalition General Order adoption process, Coalition A prepared, and the Central Valley Water Board approved, a Groundwater Assessment Report (GAR). As part of the Groundwater Assessment Report process, Coalition A evaluated groundwater conditions throughout the commodity area in question, including in shallow groundwater. Coalition A found that due to a variety of factors, the specific commodity covered by the Coalition General Order does not transport nitrate to shallow groundwater. Using this information and the previously prepared GAR, supplemented with additional information as appropriate and necessary, Coalition A first identifies the Shallow Zone for evaluating nitrate ambient conditions, which in this case may be an equivalent alternative that is approved by the Central Valley Water Board's executive officer. Coalition A then categorizes discharges from the commodity in question for the generally identified geographic areas covered by the Coalition General Order. Based on the available information, Coalition A determines that for this commodity, nitrate discharges fall either within category 1 or category 2.

Coalition A also determines that based on the estimated level of nitrate in the discharge from this commodity as it leaves the root zone, such discharges do not cause public water supply wells or domestic wells to be contaminated by nitrate. Further, there are no management zones adjacent to the areas in question.

For the discharges covered by this Coalition General Order, and that are also covered by this initial assessment, alternative compliance is not necessary. Like with all other permittees, the Central Valley Water Board will review the initial assessment submitted by Coalition A. In this case, assuming that the Central Valley Water Board agrees with the Coalition A's findings in the initial assessment, the Central Valley Water Board may find that the Coalition General Order as it currently stands complies with the Recommended Nitrate Control Program and no further actions are necessary.

EXAMPLE 2 – PATH B

Irrigated lands Coalition B covers a large geographic area, and almost all land within Coalition B's boundaries is are located in a non-priority basin, except for a portion of Coalition B that is located in one specified priority groundwater sub-basin. Coalition B receives a Notice to Comply for its members that are within the priority groundwater sub-basin. Coalition B decides that for this specified area, it wishes to develop a Management Zone and prepare a Preliminary Management Zone Proposal. Coalition B then works with the Central Valley Water Board to identify other permittees in the defined area that also discharge nitrate, and Coalition B and the Central Valley Water Board take efforts to reach out to these other permittees and other entities (such as the county, any local Groundwater Sustainability Agency, local communities, etc.) to determine if they too are interested in developing and participating in a Management Zone. Simultaneously, Coalition B is notifying and communicating with its members in the defined groundwater sub-basin of the sub-basin's priority status and Coalition B's efforts to develop of a Preliminary Management Zone Proposal.

Coalition B then works with other permittees and local entities to develop a Preliminary Management Zone Proposal. The group preparing the Preliminary Management Zone Proposal morphs from Coalition B to Management Zone Group 1. As part of developing the Preliminary Management Zone Proposal, the group also evaluates all readily available data and information to determine if there are public supply wells or domestic wells within the

Management Zone boundaries that exceed nitrate water quality objectives. (The evaluation should include a review of potential impacts based on available groundwater information if specific well information is not available.) If drinking water supply wells exceed nitrate objectives or demonstrate a high probability of exceeding nitrate objectives, Management Zone Group 1 must prepare an Early Action Plan for submittal along with the Preliminary Management Zone Proposal. The Early Action Plan must begin to be implemented 60 days after submittal and may include as a first step verification of impacted supply wells.

Between submittal of the Preliminary Management Zone Proposal and the Final Management Zone Proposal, the Central Valley Water Board informs Management Zone Group 1 of the additional permittees that indicated on their Notice of Intent their selection of Path B for complying with the Recommended Nitrate Control Program. Through a governance and financing structure developed by Management Zone Group 1, the collective permittees in concert with other participating local entities then prepare a Final Management Zone Proposal and Management Zone Implementation Plan. Further, based on its evaluation of data and information related to groundwater conditions in the Upper Zone of the Management Zone area, Management Zone Group 1 decides that there is sufficient assimilative capacity on volume-weighted bases to assimilate the nitrate discharges from the permittees covered by the Management Zone, as well as other nitrate contributions to the Upper Zone. Accordingly, as part of the Management Zone Implementation Plan, Management Zone Group 1 provides the Central Valley Water Board with an antidegradation analysis to support use of the assimilative capacity. Or, in the alternative, Management Zone Group 1 decides that there is not sufficient capacity and requests that the Central Valley Water Board adopt an Exception for nitrate discharges for permittees participating in Management Zone Group 1, which includes members of Coalition B. The Final Management Zone Implementation Plan would be utilized as supporting documentation for either request.

Within a reasonable time frame, but no longer than six months after the Management Zone Implementation Plan is complete, the Central Valley Water Board will provide notice and opportunity for public comment on the Implementation Plan and hold a hearing to consider adoption. Simultaneously, the Central Valley Water Board will consider amending permits for participating permittees, including Coalition B's General Order, to incorporate requirements associated with implementing the Management Zone Implementation as well as to allow for nitrate discharges to groundwater from participating permittees. For Coalition B, the requirements for implementation of this Management Zone may would be limited to those members that are within the Management Zone boundary area rather than being applied broadly to all Coalition B members.

EXAMPLE 3 – PATH B

Irrigated lands Coalition C covers a large geographic area, and most of the area within Coalition C's boundaries are considered to be priority sub-basins for nitrate. In all, there are four different priority sub-basins within the area subject to Coalition C's General Waste Discharge Requirements (Coalition General Order). Coalition C receives Notices to Comply for its members that are within four priority sub-basins. Similar to Coalition B in Example 2, Coalition C determines that alternative compliance for all its members is necessary and thus decides that Path B, i.e., Management Zones, are the most appropriate pathway forward. However, rather than initiating actions for four different entities to develop Management Zone

proposals and Management Zone Implementation Plans, Coalition C looks to organize one broad Management Zone entity for the watershed. Within the broad entity, there are then four sub-groups to address the four different priority sub-basins.

Besides irrigated agricultural members from Coalition C, the broad entity as well as the sub-groups need to be open to and include other permittees such as dairies, POTWs and others that discharge nitrate within the same geographic area as well as other entities such as counties with land use authority, Groundwater Sustainability Agencies, and communities that draw their drinking water supply from groundwater within the proposed Management Zones.

Each sub-group would be responsible for development of Preliminary and Final Management Zone proposals. However, for the governance and financing structure components, there would be coordination amongst the broad entity and the sub-groups for efficiencies in administration of the Management Zones. Each sub-group would also responsible for development of a Management Zone Implementation Plan for the specific area in question. All other Path B requirements would also apply, e.g., Early Action Plans, alternative compliance requirements, etc. Upon approval of the Management Zone Implementation Plans, which may occur simultaneously but is not necessary, the Central Valley Water Board would then revise the Coalition General Order as well as other permits for other permittees participating in the Management Zones to incorporate requirements for compliance with the Recommended Nitrate Control Program.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2018-XXXX

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

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

1. The Central Valley Water Board adopted the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin (Basin Plans) in 1975 and has amended them as necessary.
2. Over the last 150 years, significant changes to the landscape, land uses, and hydrologic conditions of the Central Valley have occurred. Increased anthropogenic activities such as agricultural, municipal and industrial activities, population growth, and re-engineered distribution of the valley's natural hydrologic conditions have resulted in dramatic increases in salt and nitrates in surface water, groundwater, and soils.
3. In addition to the impacts caused by anthropogenic activities, the Central Valley has naturally-occurring concentrations of salts and nitrogen compounds at elevated concentrations.
4. Communities and industry rely on the surface and ground water sources to support beneficial water uses, including municipal and domestic supply (drinking water supply), agricultural supply, industrial process supply, and industrial service supply. Elevated salt and nitrate concentrations impair, or threaten to impair, the region's water and soil quality, which in turn threaten drinking water supplies, agricultural and industrial productivity, and overall quality of life.
5. ~~Nitrate and salt pollution and t~~he continued source of ~~these constituents~~ nitrate pollution to ground water and salt pollution to surface and ground waters is both an urgent and long-term problem. Addressing these issues requires new regulatory approaches to address the challenges and sustain the economy and environment of the Central Valley.
6. In 2006, the Central Valley Water Board initiated a collaborative stakeholder initiative, known as Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), to develop a Central Valley-wide Salt and Nitrate Management Plan (SNMP).
7. On 3 February 2009, the State Water Board adopted Resolution No. 2009-0011, the *Recycled Water Policy*. The *Recycled Water Policy* calls for salt and nutrient management plans be developed through a stakeholder effort. CV-SALTS was tasked with ensuring the SNMP complied with the requirements of the *Recycled Water Policy*.

8. CV-SALTS stakeholder membership included representatives from the Central Valley and State Water Boards, agriculture, municipalities, industry, water supply, environmental justice community, state and federal regulatory agencies, and the public.
9. In 2008, the Central Valley Salinity Coalition (CVSC) was formed as a non-profit member organization that works to organize, facilitate, and collect funding for efforts needed to complete the SNMP work and efficiently manage salinity and nitrates in the Central Valley.
10. The CV-SALTS initiative embraced stakeholder engagement and involvement by forming an Executive Committee and by creating subcommittees to advise the Executive Committee on policy matters. The Executive Committee held 154 meetings between November 2007 and May 24, 2018. All meetings of the Executive Committee were open to the public.
11. The CV-SALTS initiative developed a SNMP that provides a comprehensive regulatory and programmatic approach for the sustainable management of salts and nitrate in groundwater and surface water in the Central Valley. The SNMP will be implemented through amendments to the Basin Plans. The SNMP was formally submitted by the CV-SALTS Executive Committee to the Central Valley Water Board on 12 January 2017. The SNMP recommended that the Basin Plans be amended to incorporate new requirements for managing salt and nitrate in the Central Valley. On 9 March 2017, the Board accepted the SNMP developed under the CV-SALTS initiative and directed staff to initiate basin planning actions to develop and incorporate amendments to the Basin Plans that would allow for the implementation of the strategies, policies, guidance and revisions to existing policies recommended by the SNMP as appropriate to develop a Central Valley-wide Salt and Nitrate Control Program.
12. The SNMP proposes the establishment of an overarching framework for managing salt and nitrate in the Central Valley. The SNMP goals are prioritized to recognize the need to focus limited resources on the most important water quality concerns to guide implementation:
 - a. Ensure a safe drinking water supply;
 - b. Achieve balanced salt and nitrate loadings; and
 - c. Implement long-term and managed aquifer restoration programs where reasonable, feasible and practicable.
13. The SNMP was developed based on several technical studies commissioned by the Executive Committee, input from stakeholders during the Executive Committee meetings, and extensive stakeholder discussion and public workshops.
14. Board staff developed proposed Basin Plan Amendment language to incorporate a Salt and Nitrate Control Program, including new and modified regulatory policies, into the Basin Plans.
15. The proposed Basin Plan Amendments will:
 - a. Establish a phased Salt Control Program for discharges to surface and groundwater;

- b. Establish a prioritized Nitrate Control Program for discharges to groundwater;
- c. Identify alternative compliance pathways that allow collaborative means of addressing salt and nitrate issues;
- d. Include a Conditional Prohibition of Discharge to establish enforceable conditions until the Central Valley Water Board revises permits to incorporate applicable requirements from the Control Program;
- e. Establish a Surveillance and Monitoring Program;
- f. Revise the existing Salinity Variance Policy;
- g. Revise the existing Exceptions Policy;
- h. Incorporate a Drought and Conservation Policy;
- i. Incorporate an Offsets Policy; and
- j. Clarify intent and use of applying secondary MCLs in permitting actions.

The proposed Basin Plan Amendments are designed to address both legacy and ongoing salt and nitrate accumulation issues in surface and groundwater.

16. The proposed Basin Plan Amendments will revise the following Chapters 3 and 4 of the Sacramento River and San Joaquin River Basin Plan as noted:
 - a. Chapter 3 (Water Quality Objectives) will be amended to:
 - i. Clarify that Exceptions and/or Variances may apply to water quality objectives, and
 - ii. Under Chemical Constituents, incorporate explanatory language from Title 22 for use of secondary MCLs and clarify adjustments due to natural background concentrations as well as averaging periods.
 - b. Chapter 4 (Implementation) will be amended to:
 - i. Incorporate a three-phased Salt Control Program for discharges to surface and groundwater, where each phase is anticipated to last 10-15 years;
 - ii. Incorporate a Nitrate Control Program for discharges to groundwater that includes a prioritized list of groundwater sub-basins and timeline to implement program requirements;
 - iii. Establish a Conditional Prohibition of Salt and/or Nitrate discharges that will apply from the time a permittee receives a Notice to Comply until such time that the permittees' existing waste discharge requirements are updated or amended through a public hearing process;
 - iv. Establish a Surveillance and Monitoring Program to assess the effectiveness of the Control Program;

- v. Provide Recommendations to Other Agencies;
- vi. Revise the Salinity Variance Policy;
- vii. Revise the Exception Policy;
- viii. Establish a Drought and Conservation Policy;
- ix. Establish an Offsets Policy;
- x. Clarify application of secondary MCLs in permitting actions; and
- xi. Incorporate definitions specific to the Salt and Nitrate Control Program.

The proposed Basin Plan Amendments will also add a new Appendix X-X, which lists Nitrate Control Program Non-Prioritized Groundwater Basins.

- 17. The proposed Amendments will revise Chapters of the Tulare Lake Basin Plan consistent with the revisions identified in Finding No. 16, above, will revise Chapter 3 (Water Quality Objectives) of the Tulare Lake Basin Plan to remove current maximum concentrations of salinity and chloride in discharges to surface and groundwater as well as numeric limits for annual salinity increases in hydrographic units (Table III-4 and Figure III-1), and will remove the specific boron limit of 1 mg/L and replace that limit with a reference to the appropriate boron water quality objective.
- 18. The proposed Amendments do not remove any existing authorities of the Central Valley Water Board.
- 19. The proposed Salt Control Program does not alter, revise or supersede the requirements and standards established through the Bay-Delta Plan that apply to dischargers of salts to the Delta. It sets forth a phased control program with measures to ensure controllable sources of salts remain at current levels and are not increased unless the discharger can adequately demonstrate such increases will not impact downstream users or that such discharges are compliant with the Drought and Conservation Policy also proposed by the Amendments.
- 20. The Central Valley Water Board has considered the costs of implementing the proposed Amendments as discussed in the Staff Report.
- 21. The proposed Amendments include an estimate of the cost of the proposed implementation program to agriculture, and identify potential sources of financing as required by Water Code section 13141.
- ~~22. The costs of implementing the proposed Amendments are reasonable considering the size and the geographic area affected by the Amendments and considering the economic costs identified in a 2009 study if no changes were made to current management strategies (Howitt, et. al, 2009).~~
- ~~23.~~22. The scientific portion and scientific basis of the proposed Amendments have undergone independent scientific peer review in accordance with Health and Safety Code section 57004.

24-23. For the reasons provided the Staff Report, the Central Valley Water Board finds that the proposed Amendments are consistent with the *State Antidegradation Policy* and the federal Antidegradation Policy.

25-24. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. For the reasons provided in the Staff Report, the proposed Amendments are consistent with Water Code section 106.3.

26-25. The regulatory action meets the “necessity” standard of the Administrative Procedures Act, Government Code section 11353, subdivision (b).

27-26. The Central Valley Water Board is the Lead Agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and is responsible for evaluating potentially-significant environmental impacts that may occur as a result of the proposed Amendments. The Secretary of Resources has determined that the Board’s Basin Planning Process qualifies as a certified regulatory program pursuant to Public Resources Code section 21080.5 and California Code of Regulations, title 14, section 15251(g). This determination means that the Board may prepare Substitute Environmental Documentation (SED), which includes the Staff Report and an Environmental Checklist, instead of preparing an environmental impact report. The SED satisfies the requirements of State Water Board’s regulations for the implementation of CEQA for exempt regulatory programs. (Cal. Code Regs., tit. 23, § 3775 et seq.)

28-27. On 10 October, 16 October, 21 October and 24 October 2013, Central Valley Water Board staff held CEQA public scoping meetings to seek input from public agencies and members of the public on the range of project actions, alternatives, reasonably foreseeable methods of compliance, significant impacts to be analyzed, cumulative impacts if any, and mitigation measures that will reduce impacts to a less than significant level; and to eliminate from detailed study issues found not to be important. The scoping meetings were also intended to assist in resolving concerns of affected federal, state, and local agencies and other interested persons.

29-28. Central Valley Water Board staff has prepared draft Amendments and a Staff Report dated March 2018 and circulated and publicly noticed the drafts for a public comment period between 22 March to 7 May 2018. Central Valley Water Board staff circulated a Notice of Public Hearing/Notice of Filing, a written Staff Report, an Environmental Checklist, and the proposed Amendments to interested individuals and public agencies, including persons having special expertise with regard to the environmental effects potentially involved with the proposed Amendments, for review and comment in accordance with state environmental regulations. (Cal. Code Regs., tit. 23, §§ 3775 et seq.)

30-29. The March 2018 Staff Report included a description of the proposed Amendments and analysis of reasonable alternatives to the proposed Amendments and a completed Environmental Checklist. The Staff Report included an analysis of both direct and indirect reasonably foreseeable environmental impacts where direct evaluation included impacts from the amendment adoption itself and indirect evaluation included reasonably foreseeable environmental impacts for alternative methods of compliance with the proposed Amendments.

- 31-30. The proposed Basin Plan Amendments, while facilitating basin and sub-basin improvements in water quality and ensuring provision of safe drinking water to users of nitrate impacted groundwater basins, may indirectly allow localized areas of groundwater basins/sub-basins that are near or over the applicable water quality objectives to be further degraded by salt and nitrate in the future. Since it may not be feasible to remediate all such localized areas of groundwater to assure compliance with water quality standards, the proposed Basin Plan Amendments could contribute to adverse future cumulative conditions of salt and nitrate in some localized areas which is an impact considered potentially significant and unavoidable.
- 32-31. The Staff Report finds that reasonably anticipated future activities associated with the adoption of the proposed Basin Plan Amendments may result in significant and unavoidable impacts to aesthetics, agricultural and forestry resources, and hydrology and water quality. The Staff Report contains a Statement of Overriding Considerations consistent with California Code of Regulations, title 14, section 15093 that states that the Central Valley Water Board finds the substantial and significant benefits of adopting the proposed Basin Plan Amendments outweigh the unavoidable potentially significant adverse environmental impacts to that could occur as a result of the adoption of the proposed Basin Plan Amendments.
- 33-32. In response to the comments received on the March 2018 Draft Staff Report and proposed Amendments, Central Valley Water Board staff prepared a revised Draft Staff Report and proposed Amendments dated May 2018, and prepared written responses to comments received on the March 2018 draft.
- 34-33. The Central Valley Water Board held a public hearing on 31 May and 1 June 2018 for the purposes of receiving comments and considering approval of the proposed Basin Plan Amendments. Notice of the public hearing was sent to all interested persons and published in accordance with Water Code section 13244. The Board has responded in writing to all written comments raising significant environmental issues, and has responded orally to oral comments made at the hearing raising significant environmental issues.
- 35-34. The Central Valley Water Board finds that the record as a whole and the procedures followed by staff comply with applicable CEQA requirements. (Pub. Resources Code §§ 21080.5, 21083.9, and 21159; Cal. Code Regs., tit. 14, § 15250 et seq.; Cal. Code Regs., tit. 23, § 3775 et seq.)
- 36-35. The proposed Amendments must be approved by the State Water Board, the Office of Administrative Law (OAL) and by the United States Environmental Protection Agency (USEPA). USEPA's approval is solely needed for the components relating to surface waters subject to the federal Clean Water Act. The groundwater components of the proposed Amendments are not under federal jurisdiction and become effective after OAL approval.
- 37-36. The Central Valley Water Board finds that the proposed Amendments were developed in accordance with Water Code section 13240, et seq.
- 38-37. The Central Valley Water Board finds that the proposed Amendments are consistent with Water Code section 113 which establishes a state policy that groundwater resources be managed sustainably for long-term reliability and multiple economic, social and

environmental benefits for current and future beneficial uses through development of local implementation plans and programs.

THEREFORE, BE IT RESOLVED that:

1. Pursuant to section Water Code section 13240, et seq., the Central Valley Water Board, after considering the entire record, including timely written comments, oral comments provided at the hearing, and the responses provided thereto, hereby approves the Staff Report and adopts the Amendments into the Sacramento River and San Joaquin River Basin Plan and the Tulare Lake Basin Plan as set forth in Attachment 1.
2. The Central Valley Water Board hereby approves and adopts the SED with Board approved late revisions, which was prepared in accordance with Public Resources Code section 21159, California Code of Regulations, title 14, section 15187, and California Code of Regulations, title 23, section 3777.
3. The phased and prioritized nature of the proposed Basin Plan Amendments allow discharges of wastes to continue at levels that may have an adverse effect on beneficial uses in both surface water and groundwaters during at least the next 10 years in order to prioritize provision of safe drinking water to impacted users. In addition, implementation of the proposed Basin Plan Amendments is expected to indirectly result in the need for surface and groundwater dischargers to construct specific projects for salt and nitrate management. As described in the SED, these reasonably anticipated future activities may result in significant and unavoidable impacts to aesthetics, agricultural and forestry resources, and hydrology and water quality. The following are measures incorporated into the proposed Basin Plan Amendments that will mitigate, to the extent feasible, these significant and unavoidable impacts:
 - a. *Aesthetics*: future projects will likely indirectly result in the construction of projects for salt and nitrate management. However, insufficient information pertaining to the setting, size, design, and aesthetic aspects of such projects was available at the time the SED was prepared to enable making a detailed, definitive impact assessment of the effects of such projects on aesthetics. There is, however, some potential for impacts to scenic vistas to occur, since the scope of such projects could be quite large. Separate project-specific environmental review will be performed prior to the construction of specific projects for salt and nitrate management to identify project-specific environmental impacts and to incorporate measures to avoid, reduce, or mitigate any identified significant environmental impacts to aesthetics, including scenic vistas.
 - b. *Agricultural and Forestry Resources*: future projects will likely indirectly result in the construction of projects for salt and nitrate management that may result in the conversion of farmland to non-agricultural uses. However, insufficient information pertaining to the setting, size and design of such projects was available at the time the SED was prepared to enable making a detailed, definitive impact assessment of the effects of such projects on agricultural resources. Separate project-specific environmental review will be performed prior to the construction of specific projects to identify project-specific environmental impacts and to incorporate measures to avoid, reduce, or mitigate any identified significant impacts to agricultural resources.

- c. *Hydrology and Water Quality*: near-term implementation of the proposed Basin Plan Amendments will result in discharges of wastes that will have time-limited localized impacts, and future projects will likely indirectly result in the construction of projects for salt and nitrate management that could result in additional water quality impacts. Insufficient information pertaining to the setting, size, design, and aesthetic aspects of future projects was available at the time this SED was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on hydrology and water quality. However, as described in the Staff Report, near-term impacts are expected to be substantially mitigated by requirements in the proposed Basin Plan Amendments that require the provision of replacement drinking water to impacted users under the Nitrate Control Program, conditions imposed on increased pollutant loading under both the Nitrate and Salt Control Programs, and conditions placed on the use of Exceptions and the granting of Variances.

By adopting the SED, the Board adopts the Statement of Overriding Considerations contained in the SED, finding that the long-term water quality benefits reasonably expected to occur pursuant to the proposed Basin Plan Amendments outweigh the adverse environmental effects of the near-term and long-term implementation of the proposed Basin Plan Amendments, including any effects that could be considered cumulatively significant. (Public Res. Code, § 21081; Cal. Code Regs. tit. 14, § 15093; Cal. Code Regs., tit. 23, § 3779.5, subd. (c).)

4. The proposed Basin Plan Amendments include a Salt and Nitrate Monitoring Program that is designed to assess the effectiveness of the Control Program and will develop statistically-representative ambient water quality determinations and trends. Permittees with salt or nitrate discharges must gather needed information required by the plan or must demonstrate their support for information gathering efforts undertaken by another lead entity. An assessment of ambient water quality and trends and a review of the overall progress of the Salt and Nitrate Control Program based on water quality trends will be completed at least once every 5 years or other time schedule is approved by the Central Valley Water Board. The Salt and Nitrate Monitoring Program serves as a program for monitoring or reporting as described in California Code of Regulations, title 14, section 15097 as required by California Code of Regulations, title 23, section 3780, subdivision (b).
5. The Executive Officer is directed to forward copies of the Basin Plan Amendments to the State Water Board in accordance with the requirements of Water Code section 13245.
6. The Central Valley Water Board requests that the State Water Board approve the Basin Plan Amendments in accordance with the requirements of Water Code sections 13245 and 13246 and forward it to OAL and USEPA for approval. The Central Valley Water Board specifically requests USEPA approval of all Basin Plan Amendments provisions that require USEPA approval.
7. If during its approval process the Central Valley Water Board staff, State Water Board or OAL determines that minor, non-substantive corrections to the language of the Amendments are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Central Valley Water Board of any such changes.

8. Following approval of the Basin Plan Amendments by the OAL, the Executive Officer shall file a Notice of Decision with the Secretary for Resources in accordance with Public Resources Code section 21080.5, subsection (d)(2)(E), and California Code of Regulations, title 23, section 3781.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 1 June 2018.

PAMELA C. CREEDON, Executive Officer

Attachments

Attachment 1: Amendment Language for the Sacramento River and San Joaquin River Basin Plan and the Tulare Lake Basin Plan to Incorporate a Central Valley-wide Salt and Nitrate Control Program.

References

Howitt, R., Kaplan, J., Larsen, D., MacEwan, D., Medellin-Azuara, J., Horner, G. & Lee, N. (2009). *The Economic Impacts of Central Valley Salinity. Final Report to the State Water Resources Control Board Contract 05-417-150-0*. Davis: University of California Davis.

Attachments

~~**Attachment 1:** Amendment Language for the Sacramento River and San Joaquin River Basin Plan and the Tulare Lake Basin Plan to Incorporate a Central Valley wide Salt and Nitrate Control Program.~~