

## Attachment A-6

# Revision of the Salinity Variance Program

### 1.0 Regulatory Basis for Revision of the Variance Program for Salinity

#### 1.1 Existing Salinity Variance Program

On June 6, 2014, the Central Valley Water Board adopted amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (SRSJR Basin Plan) and Water Quality Control Plan for the Tulare Lake Basin (TLB Basin Plan) (collectively hereafter referred to as “Basin Plans”) that included a Variance Program for Salinity (Salinity Variance Program)<sup>1</sup>. On March 17, 2015, the State Water Resources Control Board adopted Resolution No. 2015-0010 approving Basin Plan amendments to include the Salinity Variance Program. Because the Salinity Variance Program applies to surface waters, and is considered a water quality standards action under the Clean Water Act (CWA), the Salinity Variance Program was subject to approval by the United States Environmental Protection Agency (US EPA). The Salinity Variance was approved by U.S. EPA on July 8, 2016. With its approval, U.S. EPA specifically limited application of the Salinity Variance Program to effluent limitations being adopted to protect the agricultural beneficial use (AGR). Further, the Salinity Variance Program applies only to municipal publically owned treatment works (POTWs) that have a situation similar to or comparable to the case study cities included in the Central Valley Water Board’s supporting documents.

When it adopted the Salinity Variance Program, the Central Valley Water Board recognized that management of salinity in surface and ground waters is a major challenge for dischargers. The Central Valley Water Board further determined that during the development and initial implementation of Salt and Nitrate Management Plans prepared as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), it was appropriate to allow municipal and domestic wastewater dischargers that qualified to apply for a variance from salinity water quality standards if they have, or will have, water quality based effluent limitations for salinity that they are unable to meet.<sup>2</sup> The Salinity Variance Program applies to salinity water quality standards that are defined to include water quality standards for only the following constituents: electrical conductivity, total dissolved solids, chloride, sulfate and sodium. The current Salinity Variance Program prohibits the Central Valley Water Board from approving any salinity variance after June 30, 2019. The sunset date was included because the Central Valley Water Board intended that any extension, or permanent, long-term Salinity Variance Program should be developed through the CV-SALTS process and that stakeholders needed to make appropriate recommendations for such a policy in the Salt and Nitrate Management Plan (SNMP).

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<sup>1</sup> Central Valley Water Board Resolution No. R5-2014-0074.

<sup>2</sup> Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Water Quality Control Plan for the Tulare Lake Basin To add Policies for Variances from Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Implementation of Water Quality Objectives for Salinity, Final Staff Report, June 2014 (Final Staff Report), at p. 45.

In accordance with the Central Valley Water Board's direction in developing the current Salinity Variance Program, this SNMP recommends that the Salinity Variance Program be extended for an additional 15 years.

## 1.2 Justification for Extending the Current Salinity Variance Program

The Central Valley Water Board's original rationale for adopting the Salinity Variance Program was to provide temporary permitting flexibility while CV-SALTS was developing the SNMP, and to encourage dischargers throughout the region to actively participate in that process. If CV-SALTS stakeholders determined that an extension, or permanent Salinity Variance Program is necessary to assure successful implementation of the SNMP, the Central Valley Water Board instructed the stakeholders to describe and justify their recommendations in the SNMP itself. This policy is intended to implement that recommendation.

The SNMP recommends a long-term Salinity Management Strategy that is phased over time. The first phase (Phase I) consists of developing a Prioritization and Optimization Study for salinity management, which is intended to further define the conceptual design of SSALTS<sup>3</sup> into a feasibility study that identifies appropriate regional and sub-regional projects, including location, routing and implementation/operation of salt management projects (see Salinity Management Strategy, Attachment A-3). Phase II will generally consist of environmental permitting, obtaining funding, and engineering and design. Phase III would then consist of construction of physical projects, as identified in previous phases, to manage salt on a long-term, comprehensive basis, e.g., a Central Valley regulated brine line. Implementation of Phase III construction projects is highly dependent on obtaining necessary public funding. Because salinity management is phased in over time, the Salinity Management Strategy recommends that an Interim Salinity Permitting Approach be implemented during Phase I, and then be re-evaluated prior to implementation of Phase II. The SNMP recommends that the Interim Salinity Permitting Approach be set in place for 15 years.

The Interim Salinity Permitting Approach for Phase I would essentially require dischargers to participate in the Prioritization and Optimization Study in lieu of meeting stringent end-of-pipe salinity limitations. Dischargers that do not want to participate in the study would be given the option to opt out, but in opting out, dischargers would be subject to salinity permitting approaches that would be conservative, meaning that the selection of applicable water quality objectives would be conservative and would be based on the most restrictive criteria appropriate for the AGR and MUN beneficial uses. Further, no new dilution credits (i.e., granting of assimilative capacity) would be granted.

For surface water dischargers that are subject to federal National Pollutant Discharge Elimination System (NPDES) permits, and municipal POTWs in particular, the federal regulatory process provides the Central Valley Water Board with little discretion in allowing dischargers to participate in the Prioritization and Optimization Study in lieu of meeting strict water quality-based effluent limits (WQBELs), consistent with the approach established by the phased Salinity Management Strategy. To allow POTWs that are subject to NPDES permits to participate in the Priority and Optimization Study, such dischargers may need to seek approval of a variance from meeting effluent limitations

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<sup>3</sup> CV-SALTS, *Strategic Salinity Alternatives Land and Transportation Study, Final Phase 2 Report: Development of Potential Salt Management Strategies*, prepared by CDM Smith, October 1, 2014

based on salinity water quality standards. To do so, the current Salinity Variance Program needs to be extended and expanded. Those opting out of participating in the Prioritization and Optimization Study would not be eligible to obtain a variance under the Salinity Variance Program.

## 2.0 Proposed Revisions to Salinity Variance Program

### 2.1 Summary of Salinity Variance Program

The Salinity Variance Program restricts the Central Valley Water Board's authority solely to issuing variances for salinity-related constituents. Presently, the definition of "salinity" includes only: electrical conductivity, total dissolved solids, chloride, sulfate and sodium. For the purposes of implementing the SNMP and the Salinity Management Strategy as currently proposed, no changes to the constituents covered by the existing Salinity Variance Program are proposed for change at this time. However, to the extent that additional information and sufficient documentation is developed for other constituents such as boron, iron and manganese, the Salinity Variance Program can be revised in the future to include additional salinity-related constituents.

Notably, the authority to approve a variance for a specific salinity water quality standard does not automatically grant a variance in any given instance. Variances must be authorized through a separate Central Valley Water Board action that is subject to notice, comment and a public hearing on the salinity variance application.

In general, the current Salinity Variance Program allows POTW dischargers that have a situation that is similar to or comparable with the case study cities<sup>4</sup> to apply to the Central Valley Water Board for a variance to discharge requirements from the implementation of water quality objectives for salinity. The variance applies to the issuance of WQBELs based on a salinity water quality standard.

Under the Salinity Variance Program, a discharger's application must include in part the following:<sup>5</sup>

- Identification of the salinity constituents for which the variance is sought;
- Identification of the receiving surface water, and any available information with respect to receiving water quality and downstream beneficial uses for the specific constituent;
- Identification of the WQBEL that is being considered for adoption, or has been adopted in the NPDES permit;
- A description of salinity reduction/elimination measures that have been undertaken as of the application date, if any;
- A Salinity Reduction Study Work Plan that includes specified minimum information;

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<sup>4</sup> The three case study cities are City of Tracy, City of Stockton and City of Manteca. In short, each city cannot consistently meet stringent salinity WQBELs imposed in their NPDES permits, and each city has implemented source control programs. While water quality improved, such improvements were not sufficient to consistently comply with effluent limitations. Further, it was determined that factors under title 40 of the Code of Federal Regulations, Sections 131.10(g)(3) and 131.10(g)(6) were met because imposition of WQBELs on the POTWs would not result in attainment of water quality standards, and because the economic impact of implementing reverse osmosis would be substantial (Final Staff Report, pp. 7, 28-29.).

<sup>5</sup> Final Staff Report, pp. 43-45.

- An explanation of the basis for concluding that there are no readily available or cost-effective methodologies available to consistently attain the WQBELs for salinity;
- A detailed discussion explaining why the permittee’s situation is similar to or comparable to the case studies;
- A detailed discussion of proposed interim discharge limitation(s) that represents the highest level of treatment that the permittee can consistently achieve during the term of the variance;
- Documentation of the applicant’s active participation in CV-SALTS as indicated by a letter of support from CV-SALTS; and,
- A detailed plan of how the applicant will continue to participate in CV-SALTS and how the applicant will contribute to the development and implementation of the SNMPs.

A key requirement for granting a salinity variance, is the requirement that the discharger needs to prepare and implement a Salinity Reduction Study Work Plan. A Salinity Reduction Study Work Plan shall at a minimum include the following:<sup>6</sup>

- 1) Data on current influent and effluent salinity concentrations;
- 2) Identification of known salinity sources;
- 3) Description of current plans to reduce/eliminate known salinity sources;
- 4) Preliminary identification of other potential sources;
- 5) A proposed schedule for evaluating sources; and
- 6) A proposed schedule for identifying and evaluating potential reduction, elimination, and prevention methods.

After considering the dischargers’ application, the Central Valley Water Board may adopt a variance from WQBEL based on salinity water quality standards after public notice and hearing. The Central Valley Water Board may take action to approve a variance and issue a new, or reissue or modify an existing NPDES permit as part of the same Board meeting. The permit must contain all conditions necessary to implement the variance, which includes in part the following: (a) interim effluent limitations that are attainable during the term of the variance; (b) a requirement to implement the Salinity Reduction Study Work Plan; (c) a requirement to participate in CV-SALTS; (d) any additional monitoring that is determined necessary; (e) a provision to reopen and modify the permit based on any revision to the variance; and(f) other conditions determined necessary to implement the terms of the variance. Under the existing Salinity Variance Program, variances can be renewed upon the request of the discharger.

## 2.2 Recommendations for Revising Current Salinity Variance Program

The SNMP recommends that the current Salinity Variance Program be amended in the following ways to provide the Central Valley Water Board with the necessary authority and flexibility to permit

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<sup>6</sup> Final Staff Report, p. 44.

salinity discharges in a manner that the Central Valley Water Board deems to be appropriate and consistent with the SNMP.

- 1) Extend the provision prohibiting the Central Valley Water Board from authorizing new salinity variances or reauthorizing previously approved salinity variances from June 30, 2019 to 15 years from the effective date of Basin Plan amendments that revise the Salinity Variance Program. As part of the Prioritization and Optimization Study, the Salinity Variance Program should be reconsidered, and it should be determined at that time if the Salinity Variance Program, and the terms related thereto, should be revised to implement Phase II of the Salinity Management Strategy.
- 2) Extend application of the Salinity Variance Program to WQBELs for salinity water quality standards that are related to the MUN beneficial use, and not just the AGR beneficial use.
- 3) Revise the current Salinity Variance Program to require participation in the Prioritization and Optimization Study. The requirement to participate in CV-SALTS may also be appropriate, depending on if CV-SALTS is still intact for this purpose.
- 4) The current Salinity Variance Program should be amended to make clear that salinity variances are intended to facilitate implementation of the phased Salinity Management Strategy, and that salinity variances are not available to individuals/permittees that wish to opt out of participating in implementation of Phase I of the Salinity Management Strategy. As indicated previously, application of salinity variances for Phases II and III of the Salinity Management Strategy should be considered in conjunction with findings from the Prioritization and Optimization Study, and any Basin Plan amendments determined appropriate at the close of Phase I.

### **2.3 Authorization of Salinity Variances**

The SNMP recommends that salinity variances be authorized by the Central Valley Water Board in relatively the same manner as set forth in the current Salinity Variance Program. The conditions for authorizing the salinity variance would remain the same, except as revised based on the recommendations identified in Section 2.2 above.

Under the SNMP's recommendations, authorization for salinity variances may be granted by the Central Valley Water Board for individual dischargers, or for multiple dischargers under a watershed based NPDES permit for salinity discharges. Terms and conditions associated with the granting of a salinity variance will be incorporated into relevant NPDES permits, and failure to comply with such terms and conditions may result in the termination of the variance and/or an enforcement action.

### **3.0 Proposed Modifications to the Basin Plans to Support Policy Implementation**

The following subsections summarize the key changes anticipated for each Basin Plan to support adoption of this policy.

#### ***Existing and Potential Beneficial Uses***

No modifications anticipated.

#### ***Water Quality Objectives***

No modifications anticipated.

***Implementation***

Revise the existing Salinity Variance Program in the Basin Plans as described above.