

## Appendix P

### Justification for No Peer Review

#### Background

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) will consider a proposed amendment to the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan) that will de-designate the municipal and domestic supply (MUN) and agricultural supply (AGR) beneficial uses from groundwater within horizontally and vertically delineated areas underlying a portion of the historical Tulare Lake Bed.

The Central Valley Water Board designated the groundwater underlying this portion of the historical Tulare Lake Bed as supporting the MUN beneficial use when it incorporated State Water Board Resolution No. 88-63, the Sources of Drinking Water Policy (*Sources of Drinking Water Policy*) into the Basin Plan. When the Board incorporated the *Sources of Drinking Water Policy* into the Basin Plan, it generally designated all surface and ground water bodies as supporting the MUN beneficial use without regard to existing water quality characteristics. The Board may only exempt waterbodies from MUN beneficial use designations by amending the Basin Plan. However, the *Sources of Drinking Water Policy* identifies exception criteria that the Board may use to de-designate the MUN beneficial use, including an exception that applies to water bodies where the total dissolved solids (TDS) exceeds 3,000 milligrams per liter (mg/L) (or 5,000 microsiemens per centimeter ( $\mu\text{S}/\text{cm}$ ) as electrical conductivity (EC)). The Board may exempt waterbodies using this criterion only if such waterbodies are not expected to supply a public water system.

The Central Valley Water Board has also generally designated all groundwater in the Tulare Lake Basin as supporting the AGR beneficial use. Like the MUN beneficial use, the Board may only exempt waterbodies from AGR beneficial use designations by amending the Basin Plan. Agricultural supply includes the use of groundwater for irrigation, livestock watering, and support of vegetation for range grazing.

The Central Valley Water Board has adopted numeric and narrative water quality objectives to protect beneficial uses. When regulating discharges that could adversely affect water quality, the Board evaluates all applicable numeric water quality objectives as well as numeric interpretations of applicable narrative water quality objectives. When protecting the AGR beneficial use, the narrative Chemical Constituents water quality objective generally sets the minimum regulatory requirements that the discharge must meet. The Chemical Constituents groundwater water quality objective states, “[g]round waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” The Board has utilized salinity guidelines identified in Ayers and Westcot (Ayers and Westcot, 1985) to interpret the Basin Plan’s narrative Chemical Constituents objective, and has previously considered irrigation water supply at 700  $\mu\text{S}/\text{cm}$  to be protective of all crops at all times.

Groundwater underlying portions of the historical Tulare Lake Bed greatly exceeds both the 700  $\mu\text{S}/\text{cm}$  numeric interpretation of the narrative Chemical Constituents water quality objective and the 3,000 mg/L exception criteria in the Sources of Drinking Water Policy. Therefore, this water

may not be suitable for use as a domestic and municipal supply, and the use of this water is not appropriate for a full range of AGR purposes, either.

To determine whether this groundwater could still be reasonably used for any AGR purpose, the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative conducted a review of literature related to salinity impacts on both irrigation and stock watering. In its review of literature, CV-SALTS found that the literature concurred with the Ayers and Westcot finding that only the most salt tolerant crops may be sustainably irrigated with water exceeding 3,000  $\mu\text{S}/\text{cm}$  (CV-SALTS, 2012). CV-SALTS also identified a range of acceptable salt levels for livestock watering at 5,000  $\mu\text{S}/\text{cm}$  or less (Canadian Ministry on the Environment's Canadian Water Quality Guidelines for Livestock, 2012 as reviewed in the CV-SALTS Salt and Nutrients: Literature Review for Stock Drinking Water Final Report, 2013). CV-SALTS ultimately concluded that much of the groundwater underlying the historic Tulare Lake Bed falls outside the range of acceptability for any AGR beneficial use, based on established and peer-reviewed agricultural supply criteria.

The Central Valley Salinity Coalition (CVSC) and the Tulare Lake Drainage District jointly provided resources for delineating the horizontal and vertical extent of the groundwater underlying the Tulare Lake Bed that would not be expected to be beneficially used for MUN or AGR purposes. This technical information, along with other regulatory information developed in support of the beneficial use evaluation, is compiled in the Technical and Regulatory Evaluation of MUN and AGR Beneficial Uses in the Tulare Lake Bed Area (Beneficial Use Evaluation Report) prepared by Kenneth D. Schmidt and Associates, CDM Smith, and Summers Engineering (CV-SALTS, 2015). Water body characterization assertions in the Beneficial Use Evaluation Report were made by compiling information from the four surrounding communities, interviews with local landowners and residents, water district records, California Department of Water Resource well logs and geologic and historic water quality documentation and data.

### **Legal Basis for Peer Review**

Health and Safety Code section 57004, subdivision (d) states, in relevant part:

“No board, department, or office within the agency shall take any action to adopt the final version of a rule unless [the Board] submits the scientific portions of the proposed rule, along with a statement of the scientific findings, conclusions, and assumptions on which the scientific portions of the proposed rule are based and the supporting scientific data, studies, and other appropriate materials, to the external scientific peer review entity for its evaluation.”

The State Water Board Administrative Procedures Manual (APM) Section 8, III.D clarifies that

“Peer review is not needed for source documents that have been previously peer reviewed by a recognized expert or body of experts.”

## **Evaluation of Need for Peer Review**

Central Valley Water Board Staff believe that the proposed Basin Plan Amendment does not need external technical peer review for the following reason:

- **The proposed Basin Plan Amendment will de-designate the municipal and domestic water supply (MUN) and agricultural supply (AGR) beneficial uses from a horizontally and vertically-bounded extent of the groundwater underlying the historical Tulare Lake Bed. The Board will justify the de-designation of the MUN beneficial use based on an existing criterion established by the *Sources of Drinking Water Policy*. The Board will justify the de-designation of AGR beneficial use based on a review of peer-reviewed scientific and technical literature that concludes that existing groundwater quality renders the groundwater unsuitable for AGR uses.**

## **Conclusion**

Health and Safety Code section 57004 and APM Section 8, III. D. do not require that any portions of the proposed Basin Plan Amendment be subject to peer review because no portion of the proposed Basin Plan Amendment contains new science; all of the scientific and technical conclusions that inform the proposed Basin Plan Amendment are based on existing regulatory criteria and peer-reviewed literature.