

Appendix I

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 a horizontally and vertically delineated area underlying the southern portion of the Lost Hills Oilfield.

The Central Valley Water Board designated the groundwater underlying this portion of the historical Tulare Lakebed 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). 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 the southern portion of the Lost Hills Oilfield 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.

The Board proposes to de-designate the MUN beneficial use within a portion of the Southern Lost Hills Oilfield based on exception criteria in the Sources of Drinking Water Policy, which authorizes exemptions to the MUN designation where levels of TDS exceed 3,000 mg/L and where the Board finds that the groundwater is not reasonably expected to supply a public water system. The Board also proposes to de-designate the AGR beneficial use within the proposed de-designation zone where groundwater TDS exceeds 10,000 mg/L, utilizing the National Research Council of the National Academies 5,000 mg/L TDS guideline for livestock watering (NRC, 1974), as the poor-quality groundwater in this zone is not expected to support any known AGR use. This salinity concentration guideline was also previously used to de-designate AGR use in groundwater under another Board project in 2015, the Royal Mountain King Mine project, and has already been peer reviewed under that project utilizing the State Water Resource Control Board's University of California Peer Review contract.

Seneca Resources, the company requesting the de-designation consideration, provided resources for delineating the horizontal and vertical extent of the groundwater underlying the southern portion of the Lost Hills Oilfield 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 Report in Support of Petition for Beneficial Use De-Designation and Basin Plan Amendment South Lost Hills Oilfield Lower Tulare and Etchegoin Formations - Revised April 16, 2018. Water body characterization assertions in the Beneficial Use Evaluation Report were made by compiling information from the surrounding communities, oil producer 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.”

Peer review, however, is not needed for source documents that have been previously peer reviewed by a recognized expert or body of experts under the University of California Peer Review Contract system.

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 a portion of the southern Lost Hills Oilfield. 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 scientific conclusions based on previously 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 does not require that any portions of the proposed Basin Plan Amendment be subject to peer review because all of the scientific and technical conclusions that inform the proposed Basin Plan Amendment are based on existing regulatory criteria and previously peer-reviewed guidance and guidelines.