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Report Addendum

California Council on Science and Technology November 12, 2021

The peer-reviewed report An Assessment of Oil and Gas Water Cycle Reporting in California: Evaluation of Data Collected Pursuant to California Senate Bill 1281 (https://ccst.us/reports/oil-and-gas-water-cycle-reporting/) was completed in August 2019 based on data collected between 2015 and 2017, and delivered to the California Department of Conservation's Geologic Energy Management Division (CalGEM; formerly known as Division of Oil, Gas and Geothermal Resources) for use in the Division's data collection efforts. CCST was advised of completion of its review in September 2021.

Since the report's completion, CalGEM and the Water Boards have addressed several aspects of the report's recommendations. Some high-level responses and updates are noted below, for cross-reference with <u>the Report Executive Summary</u>, the Full Report, and Report One Pager.

Executive Summary (ES) Question ES.1. / Recommendation ES.1. Modifying dataset to reduce redundancies

CalGEM: The Division has standardized reporting forms through its new online data platform WellSTAR to collect SB 1281 data. The form design results in some reporting redundancies, as noted in Recommendation ES.1. However, removing any redundancies at this stage will require budgetary resources and the Division has currently prioritized other improvements, including those aimed at increasing public data transparency.

Executive Summary Question ES2. / Recommendation ES.2.

Collection of actual Total Dissolved Solids (TDS) data instead of TDS classifications

CalGEM: The Division does not currently collect actual TDS data. However, the Division is exploring adding actual TDS data collection in future updates to WellSTAR.

Executive Summary Question ES.3. / Recommendation ES.3.

Distinguish in data collection between produced water injection for Enhanced Oil Recovery (EOR) versus for permanent disposal

CalGEM: The Division now makes the above distinction in data collected through WellSTAR, as noted in Division data on the use of produced water, specifying for EOR or for disposal.

Executive Summary Question ES.3. / Recommendation ES.5.

Evaluate priority disposal site risks throughout the state, especially in regard to disposal of produced water into unlined ponds

State Water Board: Significant efforts to address pond-related issues by the Water Boards have been made. For instance, the Central Valley Regional Water Quality Control Board adopted Cease and Desist orders for two large unlined disposal facilities discussed in the report since the data for this report were collected. Discharges at those facilities have stopped. In addition, the Central Valley Water Board issued Cleanup and Abatement Orders for facilities that did not have waste discharge requirements and in instances where beneficial uses are threatened, enforcement actions are being taken to require the facility to cease discharge and have the facility closed in accordance with State regulations.

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About the California Council on Science and Technology

CCST is a nonpartisan, nonprofit organization established via the California State Legislature in 1988 to provide objective advice from California's scientists and research institutions. CCST responds to the Governor, the Legislature, and other State entities who request independent assessment of public policy issues affecting the State of California related to science and technology. Find CCST on Twitter @CCSTorg, on LinkedIn, and on Facebook. Discover how CCST makes California's policies stronger with science at CCST.us.