
State Water Resources Control Board

April 8, 2026

Douglas Ito, State Oil & Gas Supervisor
Department of Conservation
Geologic Energy Management Division
715 P Street, MS 1803
Sacramento, CA 95814
Douglas.Ito@conservation.ca.gov

PRELIMINARY CONCURRENCE ON THE AQUIFER EXEMPTION PROPOSAL, TULARE OIL SAND OF THE TULARE FORMATION, NORTH ANTELOPE HILLS OIL FIELD, KERN COUNTY

Dear Mr. Ito:

State Water Resources Control Board (State Water Board) staff, in consultation with Central Valley Regional Water Quality Control Board staff (collectively Water Boards staff), have reviewed the revised aquifer exemption proposal dated June 16, 2025 provided by the California Geologic Energy Management Division (CalGEM) on December 31, 2025 to exempt a portion of the Tulare Oil Sand of the Tulare Formation in the North Antelope Hills Oil Field for Class II injection.

As described in the attached memorandum, Water Boards staff assessed whether the proposal meets the criteria set forth in California Public Resources Code (PRC) section (§) 3131 and § 146.4 of Title 40 of the Code of Federal Regulations (CFR). Based on this review, and pending the public comment process, State Water Board staff preliminarily concur with the North Antelope Hills Aquifer Exemption proposal.

Conditions on Injection Projects

Approval of Class II UIC projects involve a joint review by CalGEM and Water Boards staff. CalGEM and Water Boards staff shall require monitoring or remediation of potential conduit wells within the proposed exempted area as outlined in the Conduit Remediation and Monitoring Plan dated January 29, 2026. CalGEM and Water Boards staff will consider incorporating other conditions into approvals of Class II injection projects. Potential conditions include, but are not limited to, collecting groundwater sample(s) from proposed injection project well(s) that are completed in the portion of the exempted formation proposed for injection to establish baseline groundwater quality prior to fluid injection and requiring monitoring to validate that injected fluids remain in the exempted area. In addition, for any injection project within one-quarter mile of a potential conduit well, Water Boards staff may seek additional monitoring or remediation requirements to ensure that the injected fluids remain within the exempted areas. If a

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

monitoring requirement is incorporated in a UIC project approval, the operator must submit a work plan to the Central Valley Regional Water Quality Control Board for approval.

If you have any questions regarding this matter, please contact Mr. Eric Morita at (916) 341-5649 or eric.morita@waterboards.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen Mogus", with a long horizontal flourish extending to the right.

Karen Mogus
Chief Deputy Director

cc: Patrick Pulupa
Executive Officer
Central Valley Regional Water Quality Control Board
patrick.pulupa@waterboards.ca.gov

Chris Jones
Deputy, Central District
Department of Conservation
Geologic Energy Management Division
Chris.Jones@conservation.ca.gov

Attachment

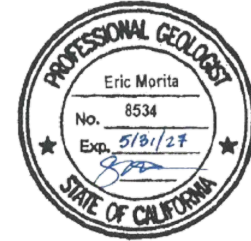
State Water Resources Control Board

TO: Karen Mogus
Chief Deputy Director

FROM: Forest Kan, PG
Senior Engineering Geologist

Eric Morita, PG
Supervising Engineering Geologist

DATE: April 8, 2026



SUBJECT: PRELIMINARY CONCURRENCE ON THE AQUIFER EXEMPTION PROPOSAL, TULARE OIL SAND OF THE TULARE FORMATION, NORTH ANTELOPE HILLS OIL FIELD, KERN COUNTY

On September 20, 2023, the California Geologic Energy Management Division (CalGEM) provided the State Water Resources Control Board (State Water Board) with an aquifer exemption proposal from Premier Resources Management, LLC (Operator) to exempt a portion of the Tulare Oil Sand of the North Antelope Hills Oil Field for Class II injection. After multiple revisions to the original proposal, the Operator submitted the final revised proposal signed and stamped by a California-licensed professional geologist and dated June 16, 2025, which was revised and received by the State Water Board on December 31, 2025 (Revised Proposal). The Operator also submitted a complete conduit analysis and a Conduit Remediation and Monitoring Plan (CRMP), dated January 29, 2026, identifying and addressing the 45 potential conduit wells (PCWs) within the proposed exempted aquifer.

State Water Board staff, in consultation with Central Valley Regional Water Quality Control Board staff (collectively Water Boards staff), reviewed the CRMP and the Revised Proposal. CalGEM and the State Water Board approved the CRMP proposed by the Operator in a letter signed on February 12, 2026. Pending the public comment process, State Water Board staff preliminarily concur with the exemption proposal for the Tulare Oil Sand. Water Boards staff have determined that the Revised Proposal meets the criteria set forth in California Public Resources Code (PRC) section (§) 3131 and § 146.4 of Title 40 of the Code of Federal Regulations (CFR), as outlined below.

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State and Federal Exemption Criteria

As required by PRC § 3131(a)(1) and 40 CFR § 146.4(a) the proposed exempted area does not currently serve as a source of drinking water. No drinking water supply wells were identified as being completed within the proposed exempted aquifer. Two water supply wells were identified within one mile of the boundary of the proposed exempted area, however the Operator was not able locate either. The nearest active municipal water supply, active agriculture, and active domestic water supply wells are 10.4 miles, 7.9 miles, and 11.4 miles from the proposed exempted area, respectively.

Consistent with 40 CFR § 146.4(c), the total dissolved solids (TDS) content of the ground water in the proposed exempted area is more than 3,000 and less than 10,000 milligrams per liter (mg/L) and it is not reasonably expected to supply a public water system due to the presence of petroleum hydrocarbons and/or elevated concentrations of other constituents, such as TDS and boron.

In addition, as per PRC § 3131(a)(2), the injected fluids are not expected to affect the quality of water that is, or may reasonably be, used for any beneficial use because (1) groundwater contained in the proposed exempted area contains petroleum hydrocarbons and/or elevated concentrations of other constituents such as TDS and boron at concentrations that limit its suitability for agricultural, domestic, and other beneficial use and the proposed exempted aquifer is a confined aquifer that is closed from surface recharge areas, and (2) the injected fluids are expected to remain within the proposed exempted area. Water analyses from within the proposed aquifer exemption area indicate that fluids within the Tulare Oil Sand contain concentrations of TDS between 9,600 to 9,900 mg/L.

The requirement of PRC § 3131(a)(3) is also satisfied because the injected fluids are expected to remain in the proposed exempted area due to a combination of geologic conditions. Vertical containment for the top of the Tulare Oil Sand is provided by the overlying low permeability continuous Tulare Clay (Figure 2). The Tulare Oil Sand is in contact with the underlying low permeability shales, which act as a confining layer, and sands, which are in hydraulic communication with the Tulare Oil Sand in portions of the proposed exempted area (Figure 2 and 3). However, the underlying sands contain fluids with TDS concentrations greater than 10,000 mg/L. Lateral containment in the proposed exempted area is provided by geologic controls, which include sand pinchouts, faults, and bed truncations.

Conduit Analysis

Consistent with PRC § 3131(c), a conduit analysis review was conducted to evaluate the potential for fluid to migrate outside of the proposed aquifer exemption area into overlying beneficial use water. This review evaluated all wells within the proposed aquifer exemption area to ensure that injected fluid will remain in the portion of the aquifer that would be exempted. By October 2025, the Operator submitted a complete conduit evaluation that includes the wellbore diagrams and well integrity information to CalGEM and Water Boards staff for 59 wells located within and near the proposed aquifer exemption area. Water Boards staff reviewed all wellbores within the aquifer

exemption area for zonal isolation across the top of the proposed exempted aquifer and/or base of beneficial use water. The Operator, CalGEM, and Water Boards identified and agreed upon a total of 45 PCWs within the proposed aquifer exemption area (Figure 4).

The CRMP includes a list and location of 45 PCWs and mitigation strategies for each, including monitoring or remediation (Figure 4). An observation well will also be required to monitor PCWs outside the Operator's lease boundary. Additionally, the Operator has committed to monitoring or remediating the PCWs as part of any future injection projects.

Figures

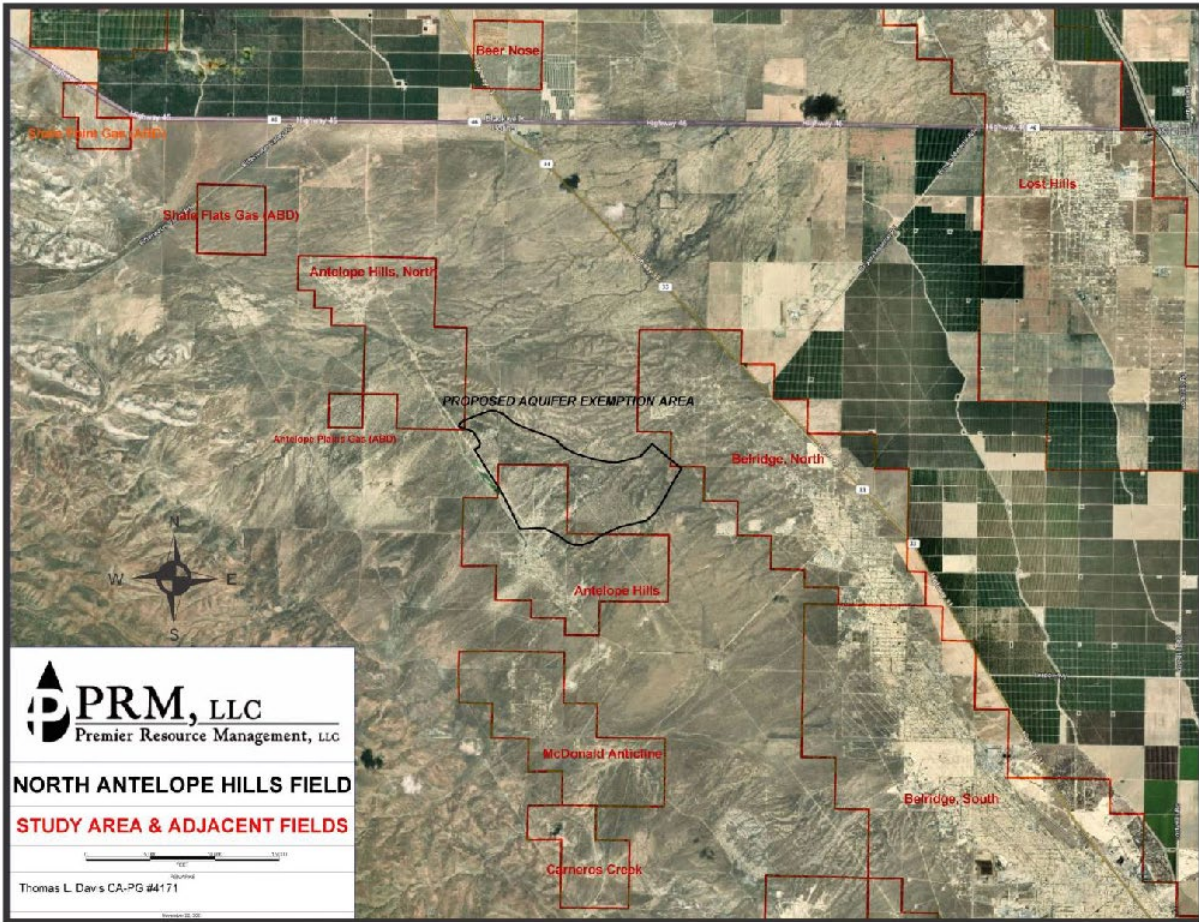


Figure 1. Location of proposed exempted area.

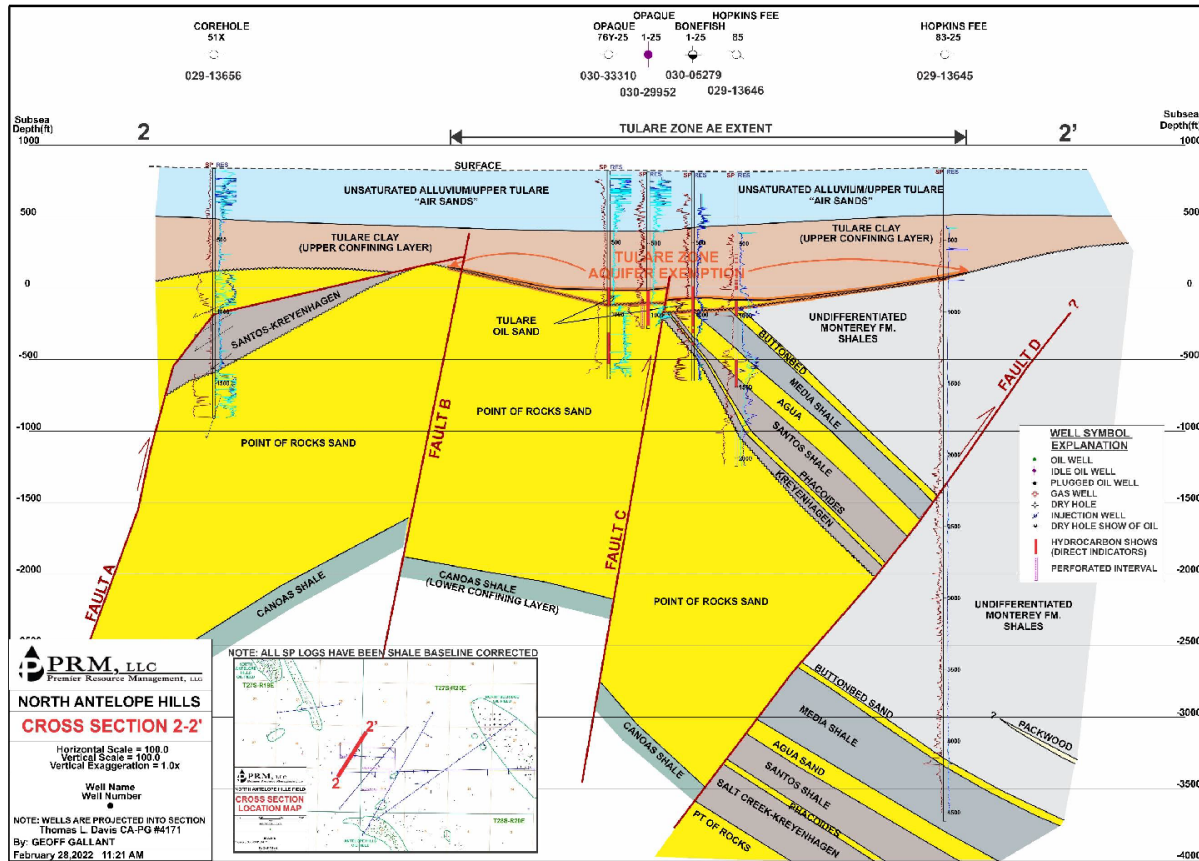


Figure 2. Cross Section through proposed exempted area.

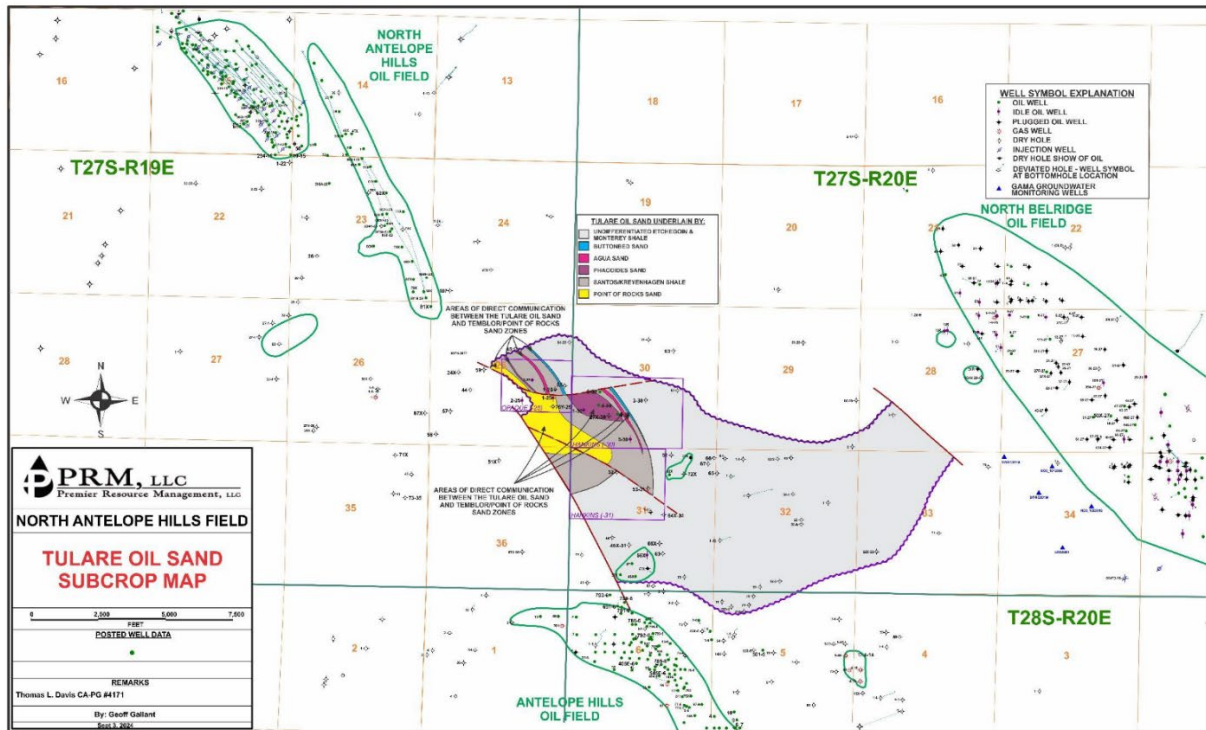


Figure 3. Subcrop map of units underlying the proposed exempted aquifer.

Opaque and Hopkins Leases Extension to North Antelope Field

PRM Conduit Analysis Remediation and Mitigation Plan w/AE, Area of review, UIC, Lease Boundaries, and Project Areas

- POR GeoTES Project Boundary
- Lease Boundaries

Wells Current Status

- Idle
- O&G
- Plugged & Abdn

Actions

- PCW/ Monitor
- Plugged & Abdn before '27
- No Action Needed
- Convert to P/T Observation
- Attempt Locate, Convert to TO or Abdn
- New TOW well for East AE Area Monitoring
- Active, Test, Monitor, P&A or remediate if well goes Idle

0 2,640 5,280 7,920 Feet
State Plane 1983 Calif V. ft

Premier Resources Management, LLC
L. J Lederhos P.E. 1/8/2026

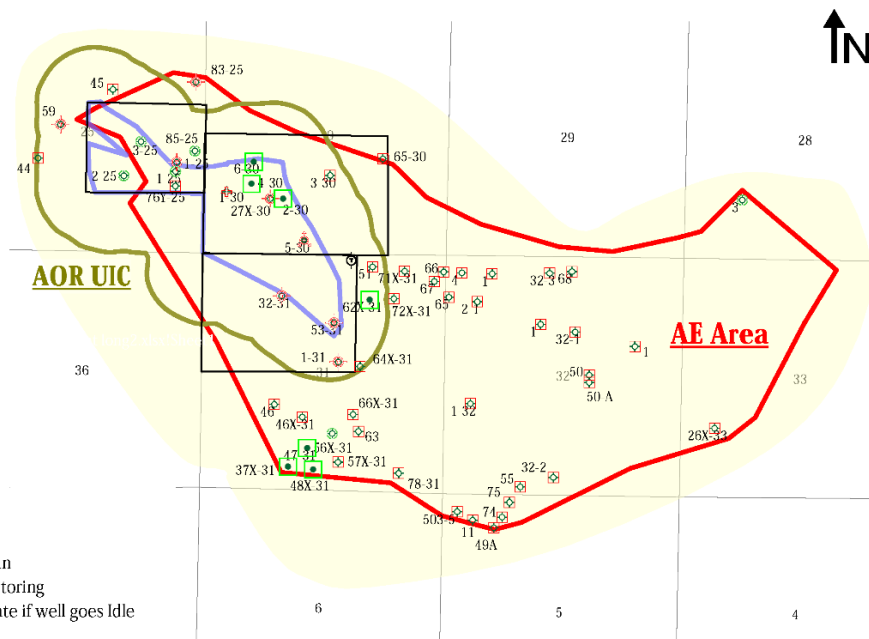


Figure 4. Location of wells and potential conduit wells within and near the proposed aquifer exemption area.