Public Comment Summaries and Responses
Aquifer Exemption Proposal for the Tulare Oil Sand of the Tulare Formation, North Antelope Hills Oil Field

I. Introduction:

Prior to submitting to the United States Environmental Protection Agency (US EPA) the proposal for an exempted aquifer determination for the Tulare Oil Sand of the Tulare Formation in the area between the North Antelope Hills Oil Field and Antelope Hills Oil Field, located in Kern County, California the California Geologic Energy Management Division (CalGEM), in association with the State Water Resources Control Board (State Water Board), conducted a public participation process to solicit input on the Aquifer Exemption Proposal. Following publication of notice in a local newspaper and emailing notice to interested parties, public comments on the proposal were accepted from June 16, 2026, through July 31, 2026. On July 16, 2026, CalGEM conducted a public comment hearing in Lost Hills, California, and representatives from the State Water Board and US EPA were also present.

Over the course of the public comment period, CalGEM received a variety of public comments via email and at the public hearing. These comments ranged from general questions about the Aquifer Exemption Proposal to general concerns about various aspects related to oil and gas production. This document describes the public comments received and presents CalGEM's responses to those comments. Where indicated, State Water Board staff provided additional responses.

To facilitate the process of reviewing and responding to the comments, CalGEM has assigned each comment a unique comment number, consisting of three components: first, a unique code number assigned to each commenter entity; second, a separating hyphen; third, a sequential number assigned to each comment from the identified commenter entity. Comment summaries have been arranged into groups based on similar topics of interest or concern. Responses to corresponding comments appear below the respective comment summaries, which are in italicized text. Note that where this document summarizes multiple comments by topic or concern, an example representative comment is quoted either as an excerpt or as a whole immediately below the comment summary; where only a single comment regarding a specific topic or concern was received, the comment is quoted either as an excerpt or as a whole. A table is included at the end of this document that provides the date the comment was received, the method in which the comment was provided, and the identified commenter entity.

II. Comment Summaries and Responses:

Comments in Opposition

Topic: General Opposition

Comments 12-1, 13-1, 14-1, 14-2, 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, 21-1, 21-2, 22-1, 23-1, 24-1, 25-1, 26-1, 27-2, 28-1, 29-1, 30-1:

Commenters expressed general opposition to the Aquifer Exemption Proposal and/or oil field injection activities. Concern was raised regarding impacts oil field operations have on water quality, air quality, and infrastructure. Most comments focused on impacts on the community of Lost Hills, while one comment referenced impacts to Buttonwillow and Belridge. Community members stated their current drinking water supply is contaminated, smelly, dirty, and that clean water needs to be sourced from other areas. Concerns included statements indicating potentially higher occurrence of disease such as cancer, hair loss, skin irritations, diabetes, and detriments to plant and animal health in Lost Hills compared to other parts of California where oil field activity is limited or non-existent such as Paso Robles.

Example "General Opposition" Comment:

"Through this note I want to say that I am completely comment in opposition to the oil project because it is contaminating our water. The water is not safe to drink, and it is not suitable for plants or animals. The pipes are corroding, animals are dying, children are getting sick, and our hair is falling out because of the contaminated water. It feels like you want to kill us little by little as if we were insects. We are human beings with families. I assume you have families too, and you would not want someone to die because of contamination. This must stop. We want clean water, not pollution. The air is also heavily polluted, we suffer from many allergies and it is difficult to breathe. We respectfully ask that you listen to us. Thank you. Thanks to the people who work here, we have all kinds of fruits and agricultural products."

Response to "General Opposition" Comments:

CalGEM and State Water Board staff hear your concerns and recognize that Lost Hills residents need help addressing their existing water-quality and water-supply concerns. Safe, reliable, and affordable drinking water is a priority shared by the Water Boards, regardless of whether a particular water problem is connected to this Aquifer Exemption Proposal. The available information indicates that the groundwater proposed for exemption is not the source of the community's existing water supply; however, demonstrating that this proposal is not expected to affect Lost Hills wells or other nearby communities does not, by itself, improve the water currently available to residents. For that reason, this response also identifies programs that may assist renters and homeowners served by private domestic wells, farmers using agricultural wells, and public water systems experiencing water-quality or infrastructure problems.

Depending on eligibility and individual circumstances, assistance may include testing, technical and financial support, and interim replacement drinking water while a longer-term solution is pursued. Before sharing links to those resources, the response below first explains why the proposed aquifer exemption, and any subsequent injection projects requiring separate approval, are not expected to adversely affect water supplies in the surrounding communities (e.g., Lost Hills, Buttonwillow, and Belridge).

The North Antelope Hills Tulare Oil Sand Aquifer Exemption Proposal Area is approximately 12 miles from Lost Hills, and is separated by two major oil fields, Lost Hills and North Belridge. Injection of fluids has not occurred in the area proposed for exemption. Additionally, there are no known active or inactive water supply wells within the Proposal Area, nor are there any known active water supply wells within one mile of the Proposal Area. The closest known active water supply wells are 7.9 miles for agricultural, 10.4 miles for public/municipal, and 11.4 miles for domestic uses. Furthermore, the project analysis concluded that the Tulare Oil Sand being proposed for exemption does not contain useable drinking water due to the naturally occurring presence of hydrocarbons, elevated concentrations of total dissolved solids, and boron. The Westside District Water Authority, who is the Groundwater Sustainability Agency of the Proposal Area, has also stated that the groundwater in the area is non-potable and generally unsuitable for municipal, domestic, and agricultural uses.

Whether you are a farmer with an agricultural well, a renter or owner with a domestic water well, or receive water from a public water supply, there are many programs available to address water quality and supply issues that may be applicable to your individual situation:

- The State Water Resources Control Board recognizes that access to safe, clean, affordable, and accessible water is a fundamental human right under California Water Code section 106.3, which declares that every human being has the right to water adequate for human consumption, cooking, and sanitary purposes. The Water Boards remain committed to advancing this policy through programs and funding aimed at helping communities address drinking water quality and reliability challenges. Human Right to Water | California State Water Resources Control Board

- Underrepresented Communities, California Tribes, and Small Farmers Groundwater Technical Assistance Program. For more information, please go online to: https://water.ca.gov/urctaprogram

- The Safe and Affordable Funding for Equity and Resilience (SAFER) program is designed to ensure Californians who lack safe, adequate, and affordable drinking water receive it as quickly as possible, and that the water systems serving them establish sustainable solutions. For information, please go online to:

https://www.waterboards.ca.gov/safer/

- Rental Property Domestic Well Testing Requirements (AB 2454) – This is a new program that started in 2026. Historically, domestic wells have been largely unregulated, leaving gaps in water quality monitoring for tens of thousands of Californians, particularly renters who lack the means to test or address contamination issues. If the domestic well meets certain criteria, domestic well owners are required to:
    - Test the well water using the free testing program.
    - Share the test results with residents/tenants within 10 days of receiving them, along with guidance on how to interpret the results.
    - Provide safe drinking water if the test results show an exceedance of safe drinking water standards, **AND** the program offers free replacement drinking water solutions (bottled water, hauled water, filling stations, etc.).
    - For information, please go online to: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/private-domestic-well-testing.html

Topic: Connectivity of the Proposal Area to Lost Hills

Comments #23-1, 27-1:

Commenters expressed concern for connectivity of the Proposal Area to Lost Hills.

Example "Connectivity of the Proposal Area to Lost Hills" Comment:

"I'm here very, very concerned about what's going on with this proposition to allow for an injection well or to get permission for it. This presentation was to show Lost Lake is not connected, and we're so very connected. You're saying that what's happening here is not contained because the soil and this clay formation, and so we should not worry, and therefore you should get permission because this soil is, you know, intact, that there will be no problem, and we can go ahead and allow for something to be even more poisoned. The poison is already here…"

Response to "Connectivity of the Proposal Area to Lost Hills" Comment:

The North Antelope Hills Tulare Oil Sand Aquifer Exemption Proposal Area is approximately 12 miles west of the town of Lost Hills, and is separated by two major oil fields, Lost Hills and North Belridge. Locally, the Tulare Oil Sand is limited to the north, south and east by sand pinchouts, and to the west by sand pinchouts and fault truncations. The sand pinchouts and fault truncations provide confinement as demonstrated by analysis of hydrocarbon occurrence. The Tulare Oil Sand is surrounded by shales and clays at the lateral and upward depositional limits. Upper confinement of the Tulare Oil Sand is provided by an approximately 500' clay layer with average permeability of 2.73 md, which acts as the cap rock by retaining

hydrocarbons from upward migration. The Tulare Oil Sands is underlain by the Kreyenhagen Formation, consisting of the Point of Rocks sands which contain groundwater with total dissolved solids concentrations above 10,000 mg/L, and is therefore not an Underground Source of Drinking Water (USDW).

While the Proposal Area is ultimately confined by low permeability shales, including the Canoas Shale, there is no known underlying low permeability geologic feature isolating the Tulare Oil Sand from the Point of Rocks sands to ensure that fluids will remain within the aquifer or portion of the aquifer that would be exempted without adding conditions. Therefore, to ensure that groundwater quality in the Lost Hills area is not affected negatively by future injection and that injected fluids remain within the proposed exempted aquifer, State Water Board staff will add a limitation to the Final Concurrence Letter requiring an inward hydraulic gradient to eliminate this scenario from being a possibility. The limitation added to the Final Concurrence Letter will be available for public comment prior to presentation before State Water Resources Control Board members.

Topic: Conduit Analysis/Monitoring

Comment #25-1:

"…And the protection that you guys are putting in place to monitor the quality and the extension or how this water is going to move with clean water that might be close by, that might be another option for the community…"

Response to "Conduit Analysis/Monitoring" Comment:

CalGEM, the State Water Board, and the Central Valley Regional Water Quality Control Board have coordinated with the operator on identifying potential conduit wells within the conduit analysis study area, defined by the spatially overlapping regions of the proposed aquifer exemption zone and any overlying or underlying aquifers containing water of beneficial use, as well as selecting suitable methods for the remediation and monitoring of such wells or otherwise demonstrating that they will not serve as a conduit for unintended fluid migration.

CalGEM and Water Boards staff are satisfied that concerns about the potential conduit wells will be addressed by the requirements outlined in the Conduit Remediation and Monitoring Plan and support the advancement of the Aquifer Exemption Proposal to the next step in the evaluation process.

As an added safeguard to resolve any concerns, Water Boards staff will be adding a volumetric limitation and project condition to the concurrence letter. The volumetric limitation and project condition will include monitoring be performed to demonstrate an inward hydraulic gradient for future projects within the aquifer proposed for exemption. This will eliminate the potential for fluid migration. The concurrence letter will be available for public comment before it is presented before the State Water Resources Control Board members for consideration.

Topic: Water Well Reporting

Comment #23-1:

"…We've read the reports. I noticed things in this presentation that were a little bit different than from what I read in the reports. Like there were different numbers on how far away certain wells were. And maybe it's disclosed on the latest report, I'm not sure, but just based on what was on the website. But it looked like some of our farms' wells are not included in that report. It just makes me question the whole thing in terms of, okay, well, if you're not counting all the wells, what's being missed?..."

Response to "Water Well Reporting" Comment:

Water supply well searches were conducted to ensure the Proposal Area does not currently serve as a source of drinking water. The water well search entailed obtaining data files from the Department of Water Resources water well completion reports, Kern County Environmental Health water well completion reports, and the Groundwater Ambient Monitoring and Assessment (GAMA) Groundwater Information System. A field reconnaissance including drone flyover was also conducted to investigate for evidence of water supply wells within one mile of the Proposal Area boundary. As a result of these efforts, there are no known active or inactive water supply wells within the Proposal Area, nor are there any known active water supply wells within one mile of the Proposal Area. The closest known active water supply wells are 7.9 miles for agricultural, 10.4 miles for public/municipal, and 11.4 miles for domestic uses. Water supply well reporting for the public hearing presentation is consistent with materials posted on the CalGEM Aquifer Exemption Webpage at: https://www.conservation.ca.gov/calgem/Pages/Aquifer-Exemptions-Status.aspx. Community members with knowledge of unreported water wells are encouraged to report water well information to the databases referenced in this response.

To more specifically address the comment, CalGEM staff reached out to the commenter in person at the conclusion of the public hearing presentation to better understand the water well reporting concern. The commenter clarified that he could not see the water well map clearly during the presentation and thought his water wells were not represented on the map. CalGEM staff reviewed the presentation slide #28 with the commenter and he verbally confirmed that his water wells would be outside the one-mile water well search radius. CalGEM staff communicated that the commenter could issue additional comments during the remainder of the public comment period. CalGEM did not receive additional comments on the topic.

After this public comment was received, State Water Board staff re-checked records from the California Department of Water Resources' (DWR) Online System for Well Completion Reports (OSWCR), that were updated in 2025 to include more accurate locations and details on over 5,000 water wells throughout the state of California (Borkovich et al., 2025; https://doi.org/10.5066/P93ICKAF), and were unable to find evidence of any additional water supply wells within 1 mile of the proposed exempted area.

Topic: Request for Additional Community Engagement

Comments #21-3, 24-2, 25-2:

Commenters requested additional community engagement for the purposes of securing clean drinking water and to discuss carcinogens resulting from contaminated water.

Example "Request for Additional Community Engagement" Comment:

"Do not forget that we need one more meeting so we can pull all the people together. Tell us ahead of time so we can let the people know ahead of time so they can come here and support us. Because to be honest, here in Lost Hills, we need a lot of help, not just you coming and talking to us nice. Please come and clean our water."

Response to "Request for Additional Community Engagement" Comments:

CalGEM encourages the Lost Hills community to hold additional meetings in their efforts to raise awareness of local environmental issues and achieve desired resolution in securing clean drinking water. For the North Antelope Hills Tulare Oil Sand Aquifer Exemption Proposal, CalGEM fulfilled state and federal guidelines for community input by holding a 45-day public comment period and facilitating a joint public hearing with the State Water Board and US EPA staff in attendance. The public comment period, which was open from June 16, 2026 to July 31, 2026, and the public hearing were both advertised in advance through the Department of Conservation's Public Affairs Office, in the Bakersfield Californian newspaper, through distribution of flyers at the Lost Hills Community Center, and with relevant documentation posted on CalGEM's Aquifer Exemption webpage at https://www.conservation.ca.gov/calgem/Pages/Aquifer-Exemptions-Status.aspx. The public hearing material was presented in Spanish with English translation at the closest community center to the Proposal Area to best accommodate members of the local community.

As part of the state's existing process of ensuring transparency CalGEM will hold an additional public notice consistent with the 1981 Application for Primacy under Section 1425, 3.3., R., of the Safe Drinking Water Act for any Underground Injection Control project spatially overlapping with the North Antelope Hills Tulare Oil Sand Aquifer Exemption Proposal Area. The Public Participation agreement states: "The policy of the division will be to publish public notices in major California newspapers of wide circulation inviting public review and comment for proposed new underground injection projects, or for substantial changes in the permit conditions of existing projects. Public hearing may be held prior to the issuance of new permits or modifications of existing permits at the discretion of the State Oil and Gas Supervisor. Public response to the published notices will be the prime factor in determining whether a public hearing is warranted."

Furthermore, the State Water Board will open another public comment period and hold a public meeting to consider the Tulare Oil Sand Aquifer Exemption Proposal in accordance with Public Resources Code § 3131. Please subscribe to our mailing list using the following link: https://public.govdelivery.com/accounts/CAWRCB/subscriber/new?qsp=ca_swrcb.

Topic: Request for a More Complete Administrative Record

Comment #5-1

"…Although the record documents substantial review, it does not presently provide a consolidated explanation that distinguishes:

• the technical issues CalGEM independently identified before State or Regional Water Board review;

• the technical analyses independently performed by the State Water Board;

• the regional or site-specific analyses independently performed by the Central Valley Regional Water Quality Control Board;

• the subjects reviewed by more than one California agency and whether those reviews were complementary, corroborative, sequential, or duplicative;

• the comments and recommendations that caused each specific revision to the proposal;

• the recommendations that confirmed conclusions already reached by another agency without changing the proposal;

• the recommendations that were rejected, modified, deferred, or left for later UIC project approvals; and

• the issues that remain for EPA's independent review.

Project-Specific Questions

• Which comments from the State Water Resources Control Board resulted in specific revisions to the North Antelope Hills proposal?

• Which comments from the Central Valley Regional Water Quality Control Board resulted in specific revisions to the proposal?

• Which revisions were already being developed or required by CalGEM before State or Regional Water Board review?

• Which recommendations independently confirmed analyses already completed by another participating agency rather than changing them?

• Which recommendations introduced new technical analyses, data, conclusions, conditions, or project modifications?

• Which recommendations were not adopted, and what was the technical basis for not adopting them?

• Which technical issues remained unresolved and were deferred to future Class II UIC project approvals, monitoring plans, or permit conditions?

• Which recommendations materially affected California's final recommendation to EPA?

I request that the written response to comments distinguish the independent work of CalGEM, the State Water Resources Control Board, and the Central Valley Regional Water Quality Control Board; identify the changes attributable to each review; explain where reviews overlapped and what distinct value each supplied; and identify the matters remaining for EPA's independent determination. The comments and responses should be included in the record supporting any recommendation transmitted to EPA…"

Response to "Request for a More Complete Administrative Record" Comment:

CalGEM has posted agency documents pertinent to the North Antelope Hills Tulare Oil Sand Aquifer Exemption Proposal on the CalGEM Aquifer Exemption Webpage at: https://www.conservation.ca.gov/calgem/Pages/Aquifer-Exemptions-Status.aspx. For a more complete administrative record, including but not limited to reviews, analyses, recommendations, revisions, rejections, modifications, deferrals, or technical issues not covered in agency documents posted online, CalGEM encourages the commenter to submit a Public Records Act request pursuant to Government Code sections 7920-7931 for materials in question.

Comments in Support

Topic: General Support

Comment #1-1, 2-1, 3-1, 4-1, 6-1, 7-1, 8-1, 9-1, 10-1, 10-2, 11-1, 31-1, 33-1

Commenters expressed general support for the Aquifer Exemption Proposal.

Response to General Support Comments:

Noted.

Neutral Comment - Neither Support nor Oppose

Topic: Neutral Comment

Comment # 32-1

Commenter noted resources available to the public.

Response to Neutral Comment:

The resources noted in the comment have been posted in the Response to "General Opposition" Comments section of this document.

Comment Number	Date Received	Source	From	Comment Grouping	Sub-Grouping
1-1	7/6/2026	Email	Roy Coefield	Comment in Support	General Support
2-1	7/6/2026	Email	David Braew	Comment in Support	General Support
3-1	7/9/2026	Email	Shannon Grove (submitted by Mark Reeder)	Comment in Support	General Support
4-1	7/10/2026	Email	James W. Rector	Comment in Support	General Support
5-1	7/10/2026	Email	Jamie Jones	Comment in Opposition	Request for More Complete Administrative Record
6-1	7/11/2026	Email	Linda Steiner	Comment in Support	General Support
7-1	7/13/2026	Email	Jim Clifford	Comment in Support	General Support
8-1	7/14/2026	Email	Brenda Umbro	Comment in Support	General Support
9-1	7/15/2026	Email	Glenn A. Reynolds	Comment in Support	General Support
10-1	7/16/2026	Email	Michael Umbro	Comment in Support	General Support
10-2	7/16/2026	Email	Michael Umbro	Comment in Support	General Support

Comment Number	Date Received	Source	From	Comment Grouping	Sub-Grouping
11-1	7/16/2026	Email	Dave Noerr (submitted by Michael Umbro)	Comment in Support	General Support
12-1	7/16/2026	Email	Singh Gurpreet	Comment in Opposition	General Opposition
13-1	7/16/2026	Email	Emiliana Gonzales	Comment in Opposition	General Opposition
14-1	7/16/2026	Email	Lázaro González	Comment in Opposition	General Opposition
14-2	7/16/2026	In-person at NAH Public Hearing	Lazaro Gonzalez	Comment in Opposition	General Opposition
15-1	7/16/2026	Email	Bianca Barajas	Comment in Opposition	General Opposition
16-1	7/16/2026	Email	José Luis	Comment in Opposition	General Opposition
17-1	7/16/2026	Email	Mary S.	Comment in Opposition	General Opposition
18-1	7/16/2026	Email	Luis Ortiz	Comment in Opposition	General Opposition
19-1	7/16/2026	Email	Enrique H. A.	Comment in Opposition	General Opposition
20-1	7/16/2026	Email	Fernando	Comment in Opposition	General Opposition

Comment Number	Date Received	Source	From	Comment Grouping	Sub-Grouping
21-1	7/16/2026	In-person at NAH Public Hearing	Saul Ruiz	Comment in Opposition	General Opposition
21-2	7/16/2026	In-person at NAH Public Hearing	Saul Ruiz	Comment in Opposition	General Opposition
21-3	7/16/2026	In-person at NAH Public Hearing	Saul Ruiz	Comment in Opposition	Request for Additional Community Engagement
22-1	7/16/2026	In-person at NAH Public Hearing	Liliana Gonzalez	Comment in Opposition	General Opposition
23-1	7/16/2026	In-person at NAH Public Hearing	Brad Kroger	Comment in Opposition	General Opposition/Connectivity of the Proposal Area to Lost Hills/Water Well Reporting
24-1	7/16/2026	In-person at NAH Public Hearing	Ana Maria Diaz	Comment in Opposition	General Opposition
24-2	7/16/2026	In-person at NAH Public Hearing	Ana Maria Diaz	Comment in Opposition	Request for Additional Community Engagement
25-1	7/16/2026	In-person at NAH Public Hearing	Jesus Alonzo	Comment in Opposition	General Opposition/Conduit Analysis

Comment Number	Date Received	Source	From	Comment Grouping	Sub-Grouping
25-2	7/16/2026	In-person at NAH Public Hearing	Jesus Alonzo	Comment in Opposition	Request for Additional Community Engagement
26-1	7/16/2026	In-person at NAH Public Hearing	Imelda	Comment in Opposition	General Opposition
27-1	7/16/2026	In-person at NAH Public Hearing	Marie Guerrero	Comment in Opposition	Connectivity of the Proposal Area to Lost Hills
27-2	7/16/2026	In-person at NAH Public Hearing	Marie Guerrero	Comment in Opposition	General Opposition
28-1	7/16/2026	In-person at NAH Public Hearing	Rosario Molina	Comment in Opposition	General Opposition
29-1	7/16/2026	In-person at NAH Public Hearing	Yolanda	Comment in Opposition	General Opposition
30-1	7/16/2026	In-person at NAH Public Hearing	Irma Medina	Comment in Opposition	General Opposition
31-1	7/21/2026	Email	Michael A. Mische	Comment in Support	General Support
32-1	7/23/2026	Email	Christopher Martinez	Neither Support or Oppose	Neither Support or Oppose

Comment Number	Date Received	Source	From	Comment Grouping	Sub-Grouping
33-1	7/28/2026	Email	Matthew Bigson	Comment in Support	General Support