



**California Geologic Energy Management Division**

# UNDERGROUND INJECTION CONTROL PROGRAM REPORT

**PERMITTING & PROGRAM ASSESSMENT**

**Reporting Period: April 1, 2022, to March 31, 2023**

Prepared Pursuant to Public Resources Code section 3114,  
subdivision (a)

Senate Bill 1493 (Ch. 742, Stats. of 2018)

**February 2024**

***Gavin Newsom, Governor, State of California***  
***David Shabazian, Director, Department of Conservation***

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## ABOUT THE CALIFORNIA GEOLOGIC ENERGY MANAGEMENT DIVISION

The California Geologic Energy Management Division (CalGEM) prioritizes the protection of public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal operations in California. To do that, CalGEM uses science and sound engineering practices to regulate the drilling, operation, and permanent closure of wells associated with the discovery and production of oil, gas, and geothermal resources. CalGEM also regulates certain pipelines and facilities associated with production and injection. These regulatory duties include witnessing tests, inspections, and subsurface operations.

When CalGEM was established in 1915 (then known as the Department of Petroleum and Gas), the initial focus of regulation was the protection of oil and gas resources in the State from production practices that could harm the ultimate level of hydrocarbon recovery.

Early CalGEM regulations included well spacing requirements and authority to limit production rates. However, those regulations and the focus of CalGEM have evolved and come to include the protection of public health, safety, and the environment.

CalGEM has grown significantly since it was established in 1915 and has taken major steps to ensure it will be able to handle challenges in a manner consistent with public expectations for a modern, efficient, collaborative, and science-driven regulatory agency.

In 2019, the mission of CalGEM changed to include protecting public health and safety, environmental quality, and the reduction and mitigation of greenhouse gas emissions associated with the development of hydrocarbon and geothermal resources in a manner that meets the energy needs of the state.

### CalGEM Districts

CalGEM operates out of three districts (Northern, Central, and Southern) to best serve the needs of the State. Each district has its own offices where staff are available to assist the public and stakeholders. For more information about CalGEM, visit our website at: <https://www.conservation.ca.gov/calgem>



## EXECUTIVE SUMMARY

This fifth annual report on underground injection control (UIC) operations in California includes the information required by Senate Bill 1493 (Committee on Natural Resources and Water, Ch. 742, Statutes of 2018) for the period from April 1, 2022, to March 31, 2023.

The following are key facts from this report:

- A total of eight Class II Underground Injection Control project applications were approved by CalGEM during this reporting period.
- Beginning from receipt of application to approval and issuance of the Project Approval Letter (PAL), the average project review time was 764 days, or about 25 months. This is less than the prior year's average of 32 months.
- Beginning from the time CalGEM receives the application from the operator to issuance of the Project Approval Letter, the average total project review time was 764 days or about 25 months. This is an improvement over the previous year's average of 32 months and includes the time it takes for the operator to respond to CalGEM's review of the initial submission until the application is deemed complete (average of 126 days). Once the application is deemed complete, the average project review time to Project Approval Letter issuance was 638 days for CalGEM, and 79 days for the Water Boards. Water Board and CalGEM review periods usually overlap to some extent.
- During the reporting period, the monthly average number of pending project applications (New; Expansion; Existing Active UIC projects to ensure full compliance with current statutes/regulations) was 102. As of March 31, 2023, 95 out of these 102 applications had been pending for over one year.
- During the reporting period, there were 15 pending aquifer exemption (AE) packages. CalGEM sent two AE proposal packages to the United States Environmental Protection Agency (US EPA) – Holser and Lompoc. Thirteen other AE packages were pending as of March 31, 2023. No AE proposal approvals were received from the US EPA during the reporting period.
- A total of 16 enforcement actions were taken to address a total of 42 UIC related violations identified during the reporting period. One enforcement action may cover multiple violations.
- There were 156 well shut-ins during this period. Well shut-ins on the record include one voluntary relinquishment of injection permits plus 155 shut-ins due to wells



automatically losing injection approval under circumstances prescribed in the updated UIC regulations.

- CalGEM had approximately 74 full-time equivalent UIC staff. This is based on an estimated percentage of time staff spent performing UIC related tasks during the reporting period and it does not include vacancies. There were 11 full-time equivalent UIC vacancies.
- The Water Boards had 28 full-time equivalent staff positions working on UIC tasks during the reporting period. The Water Boards had four full-time equivalent vacancies during the reporting period.
- Internal review of approved UIC projects to confirm approved projects comply fully with applicable statutes and regulations has been completed for 50 projects. These projects are awaiting input from the Water Boards.
- As of March 31, 2023, there were 573 projects that have not yet been reviewed for compliance with today's statutes and regulations. Preliminary data gathering is underway for most of CalGEM's 774 active UIC projects.



## INTRODUCTION

### Objective & Scope of Report

This annual report on the CalGEM Underground Injection Control (UIC) Program is required by Senate Bill (SB) 1493 (Committee on Natural Resources and Water, Ch. 742, Statutes of 2018), as codified in Public Resources Code section 3114.

This fifth SB 1493 report covers the period from April 1, 2022, to March 31, 2023, and is synchronized with the United States Environmental Protection Agency (US EPA) 7520 reporting cycle which is the source of data and information for items referenced in Public Resources Code section 3114, subdivision (a)(8) through (a)(10).

### Report Requirements

Public Resources Code section 3114, subdivision (a), requires CalGEM to provide, in consultation with the State Water Resources Control Board (State Water Board), the following information about the UIC Program:

1. The number and location of underground injection control project approvals issued by the Department of Conservation (DOC), including projects that were approved but subsequently lapsed without having commenced injection.
2. The monthly average number of pending project applications.
3. The average length of time to obtain an underground injection control project approval from the date of receipt of the complete application to the date of issuance.
4. The average amount of time to review an underground injection control project proposal by CalGEM and the average combined review time by the State Water Board and regional water quality control boards for each proposed underground injection control project.
5. The number of project proposals pending for over one year.
6. A list of pending AE packages, if any, and their status in the review process.
7. The average length of time to process an AE package and the average amount of time to review a proposed AE package by CalGEM and the average combined review time by the State Water Board and regional water quality control boards for each aquifer exemption proposal.



8. The number and description of underground injection control related violations identified.
9. The number of enforcement actions taken by DOC.
10. The number of shut-in orders or requests to relinquish permits and the status of those orders or requests.
11. The number, classification, and location of staff with work related to underground injection control.
12. The number of staff vacancies for positions associated with underground injection control.
13. Any state or federal legislation, administrative, or rulemaking changes to the Program.
14. The number of underground injection control projects reviewed for compliance with statutes and regulations in each district and a summary of findings from project reviews completed during the reporting period, including any steps taken to address identified deficiencies.
15. The number of underground injection control projects that have not been reviewed for compliance with applicable statutes and regulations within the prior two years.
16. Summary of significant milestones in the compliance schedule agreed to with the US EPA, as indicated in the March 9, 2015, letter to CalGEM and the State Water Board from the US EPA, including, but not limited to, regulatory updates, evaluations of injection wells, and AE packages.
17. Summary of activities undertaken by the underground injection control review panel established pursuant to Section 46 of Chapter 24 of the Statutes of 2015.





## Contact Information

For more information about the UIC Program, visit the Program webpage:

[https://www.conservation.ca.gov/calgem/general\\_information/Pages/UndergroundInjectionControl\(UIC\).aspx](https://www.conservation.ca.gov/calgem/general_information/Pages/UndergroundInjectionControl(UIC).aspx)

For questions regarding the content of this report, contact the CalGEM Public Transparency Office at [CalGEMPublicTransparencyOffice@conservation.ca.gov](mailto:CalGEMPublicTransparencyOffice@conservation.ca.gov)



## UNDERGROUND INJECTION CONTROL PROGRAM

### 1. UIC Projects

#### 1.1 UIC Project Approvals

*Public Resources Code section 3114, subdivision (a)(1): The number and location of underground injection control project approvals issued by the DOC, including projects that were approved but subsequently lapsed without having commenced injection.*

During the reporting period, CalGEM approved eight UIC project applications. This includes two expansions of an existing project, five reviews of existing active UIC projects to ensure full compliance with current statutes/regulations, and one existing active UIC project review with an expansion component.

LOCATION (County)	# of UIC Projects Approved
<b>Southern District Office</b> Los Angeles (5), Orange (1)	6
<b>Central District Office</b> Kern (2)	2
<b>Northern District Office</b> N/A (0)	0
<b>TOTAL</b>	<b>8</b>

#### 1.2 Pending UIC Project Applications

*Public Resources Code section 3114, subdivision (a)(2): The monthly average number of pending project applications.*

Pending applications are defined as those that are in the review process and have not yet received a PAL. For purposes of this report, projects are only added to the "pending" list when a project application is submitted in WellSTAR. On average, 102 UIC project applications were pending every month during the reporting period. For consistency with previous reporting, applications for existing active UIC project reviews for regulatory compliance are included in this number if they include an expansion component.

During the reporting period, CalGEM acted as the lead agency for California Environmental Quality Act (CEQA) permitting in Kern County from April 1, 2022, to November 1, 2022, and from January 27, 2023, to March 31, 2023 (Notice to Operators



2023-02).<sup>1</sup> Acting in the CEQA lead agency role increases the scope and complexity of UIC project reviews. The change in CEQA lead status is discussed further in Section 5.1.3.

### **1.3 UIC Project Approval Timeline**

*Public Resources Code section 3114, subdivision (a)(3): The average length of time to obtain an underground injection control project approval from the date of receipt of complete application to the date of issuance.*

Beginning from the date a UIC project application is deemed complete, an average of 638 days was needed to complete the review of the application during this reporting period. This is less than the 781-day average during the previous reporting period. The total time from submission of the application to determination averaged 764 days. This is a reduction from the prior report average of 971 days.

UIC project applications undergo cursory reviews to ensure the dataset is complete. Districts will not start detailed technical reviews until the package is verified complete. Project applications requiring an AE are not deemed complete until receipt of AE approval by the US EPA Record of Decision is verified.

### **1.4 UIC Project Application Review**

*Public Resources Code section 3114, subdivision (a)(4): The average amount of time to review an underground injection control project proposal by CalGEM and the average combined review time by the State Water Board and regional water quality control boards for each proposed underground injection control project.*

During the reporting period, the average CalGEM review time for UIC project proposals was 685 days. This is also a reduction from the previous average of 905 days. CalGEM review time begins the day the application is submitted and concludes when a determination is made, including if a PAL is issued, minus Water Boards' review time. This includes, among other things, the cursory completeness check, interagency communications, as well as time spent obtaining additional data/information necessary to deem the application complete.

During the reporting period, the Water Boards' average review time was 79 days. The Water Boards' review begins when an application is received from CalGEM. The Water

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<sup>1</sup> In accordance with Title 14 CCR section 15096, CalGEM, as a responsible agency under CEQA will consider Kern County's Supplemental Recirculated Environmental Impact Report (SREIR) when reviewing any Notice of Intention (NOI) or UIC application (project) for oil and gas activities, or another, and reach its own conclusion on whether and how to approve the project, as defined by California Public Resources Code section 21065. Prior to reaching a decision on the project, CalGEM will consider the environmental effects of the project as shown in the SREIR. (NTO 2023-02)



Boards' review concludes when either a No Objection, Objection, or No Intent to Comment letter is sent to CalGEM. This time includes interagency communications and staff review. CalGEM and the Water Boards' review periods may overlap or take place simultaneously.

### **1.5 Pending UIC Project Applications**

*Public Resources Code section 3114, subdivision (a)(5): The number of project proposals pending for over one year.*

As of March 31, 2023, 93 UIC project proposals had been pending for over one year. Sixty of those 93 proposals were under CalGEM review which, when completed, will be submitted to the Water Boards. The remaining 33 UIC project proposals were under Water Boards' review. Thirteen of the 93 applications were awaiting Operator's input at either the CalGEM or Water Boards' review stage.

## **2. Aquifer Exemptions**

### **2.1 Pending Aquifer Exemptions**

*Public Resources Code section 3114, subdivision (a)(6): A list of pending aquifer exemptions, if any, and their status in the review process.*

There were 15 pending AE packages during the reporting period. In a letter dated September 16, 2021, the US EPA acknowledged the State's decision to conduct conduit analysis to assess potential fluid migration where a proposed AE area is overlain by beneficial use aquifers. The US EPA stated that the conduit analysis should be completed before submitting the AE package to the US EPA for review. The status of the packages, including any required conduit analysis, as of March 31, 2023, is provided below.



**AQUIFER EXEMPTION STATUS AS OF MARCH 31, 2023**

Lynch Canyon (Lanigan)	AE proposal was submitted to US EPA on February 26, 2020. CalGEM is responding to US EPA questions and updating documentation.
Sespe	AE proposal was submitted to US EPA on October 27, 2021. CalGEM completed the responses to US EPA questions and finalized the updated documents in March 2023. AE package is under US EPA review and awaiting a final decision.
Cat Canyon	Conduit analysis is ongoing. CalGEM has received wellbore data information from applicant operators and is in the final stages of identifying potential conduits with the Water Boards.
Holser	A public comment period consistent with Public Resources Code section 3131, subdivision (b), was provided, as was a hearing to receive public comments on March 29, 2022. The AE proposal was submitted to US EPA on December 23, 2022
Oxnard	As a result of evolving applicant operator plans to not continue injection in the area of this contemplated AE package, CalGEM formalized suspension of injection approval via a regulatory notice process for all wells in the area that were completed into a potential Underground Source of Drinking Water (USDW) zone. The regulatory notice implementing this suspension of injection approval was issued and took effect in April 2022. As of July 2022, CalGEM confirmed that injection has ceased, and the AE package is no longer within the subset of "compliance-related" AE packages. The State will continue to evaluate this AE package for potential recommendation to the US EPA.
Lompoc	State Water Board preliminary concurrence was received on July 27, 2021. A public comment period consistent with Public Resources Code section 3131, subdivision (b), was provided, as was a hearing to receive public comments, which occurred on April 12, 2022. The AE proposal was submitted to US EPA on December 23, 2022.



Midway-Sunset II (Tulare)	CalGEM and the Water Boards have completed the conduit analysis and identified potential conduits. Early discussions regarding remediation and/or monitoring plans to address potential conduits are underway.
Mt. Poso (Dorsey Area)	CalGEM issued a notice to suspend injection into potential USDW zones (i.e., zones outside the understood boundaries of already exempted portions of formations) on July 8, 2022. As of July 2022, CalGEM confirmed that injection has ceased, and the AE package is no longer within the subset of "compliance-related" AE packages. The State will continue to evaluate this AE package for potential recommendation to US EPA.
Kern River	CalGEM and the Water Boards have completed the conduit analysis and identified potential conduits. Early discussions regarding remediation and/or monitoring plans with the applicant operator are underway.
Casmalia	Updated AE package was received May 7, 2020, and returned to the applicant operator on June 5, 2020, for revisions. No responses have been received from the applicant operator since.
Deer Creek	The project was transferred to the new applicant operator, and they are evaluating if they want to proceed with this AE package.
Round Mountain (South Area)	Under review by CalGEM and the State Water Board. CalGEM continued meeting with the applicant operator, State Water Board, and local water agencies. It has been determined that a conduit analysis will be necessary.
Northeast Edison	The AE package is still in an early stage of review by CalGEM. Central District waiting for the applicant operator's responses on feedback and additional requirements sent on May 20, 2019.
North Antelope Hills	CalGEM received an updated package on October 6, 2021. CalGEM reviewed the updated package and sent comments to the applicant operator in December 2022. The applicant operator submitted responses for CalGEM's review on February 10, 2023, which are still under review by CalGEM.



Lynch Canyon  
D-Sands

An updated AE package and conduit analysis data were received from the applicant operator in January 2023. CalGEM reviewed these materials and sent comments to the applicant operator in March 2023.

## **2.2 Aquifer Exemption Review**

*Public Resources Code section 3114, subdivision (a)(7): The average length of time to process an aquifer exemption and the average amount of time to review a proposed aquifer exemption by CalGEM, and the average combined review time by the State Water Board and regional water quality control boards for each aquifer exemption proposal.*

During the reporting period, CalGEM and the Water Boards completed reviews of and submitted to US EPA the Holser AE proposal and Lompoc AE proposal.

No US EPA approvals of AE packages were received during the reporting period.

The CalGEM review time for the Holser AE proposal was approximately 75 months and for the Lompoc AE proposal it was approximately 79 months. CalGEM review time begins the day the application package is received and concludes the day a determination to submit the proposal to US EPA or not is made. This time includes the exchange of information through interagency communications, the public comment period, and time spent obtaining additional or missing data and information from operators. These activities continue after receipt of the State Water Board's final concurrence letter.

The Water Boards' review time for the Holser AE proposal was approximately 12 months and for the Lompoc AE proposal it was approximately 22 months. Water Boards' review time begins the day a complete AE proposal is received from CalGEM and concludes when a final concurrence letter is issued by the State Water Board. The calculated review time aims to capture only the time Water Boards were actively reviewing the AE proposals. However, at times, CalGEM and the Water Boards' review periods may overlap or take place simultaneously.

## **3. Enforcement**

### **3.1 UIC Violations**

*Public Resources Code section 3114, subdivision (a)(8): The number and description of underground injection control related violations identified.*

During the reporting period, CalGEM identified 42 violations of its UIC regulations. This is a significantly lower number of violations than CalGEM identified in this section of the



report during prior years; this difference does not reflect a drastic change in compliance or enforcement activity but rather a shift in which types of violations are presented here in order to provide more precise and informative information in alignment with the UIC-focused nature of the report.

Previously, CalGEM completed this section of the report using compliance information drawn from its EPA 7520 form for UIC Federal Reporting System, a form used for satisfying reporting requirements distinct from those in Public Resources Code section 3114. The information assembled for the EPA 7520 form generally aggregates all types of violations involving an injection well, including not just violations of CalGEM's specific UIC regulations (found in California Code of Regulations, title 14, sections 1724.5 through 1724.13) but also violations of more generalized requirements for wellsite maintenance, idle well management, and so forth.

Beginning with this reporting period, CalGEM has reframed the information in this section to focus only on violations of the specific UIC regulatory requirements. CalGEM believes this approach provides more precise and informative engagement with the UIC-specific call of Public Resources Code section 3114, subdivision (a)(8).

The number and description of the 42 underground injection control related violations for the current reporting period are listed below.

### **UIC VIOLATIONS IDENTIFIED**

<b>CCR</b>	<b>Violation Description</b>	<b>Count</b>
<b>1724.7(a)</b>	Failure to demonstrate confined injection	1
<b>1724.10(i)(2)</b>	Failure to submit test results	19
<b>1724.10.4(a)</b>	Failure to comply with continuous pressure monitoring requirements	5
<b>1724.11(a)</b>	Failure to prevent surface expressions	1
<b>1724.13(a)</b>	Unauthorized injection	6
<b>1724.13(c)</b>	Failure to disconnect lines after loss of approval to inject	10
	<b>Total</b>	<b>42</b>

The one violation related to "1724.7(a)" is for failure to demonstrate that injection is confined to the approved injection zone. (Cal. Code Regs., tit. 14, § 1724.7, subd. (a).)

The 19 violations related to "1724.10(i)(2)" are for failure to submit digital copies of surveys and test results to CalGEM within 60 days of the tests. (Cal. Code Regs., tit. 14, § 1724.10, subd. (i)(2).)





For the five violations related to continuous pressure monitoring requirements, one was due to failure to continuously record well-specific injection pressure for a well that is approved for injection by CalGEM (Cal. Code Regs., tit. 14, § 1724.10.4, subd. (a)(1).), and the remaining four are related to failure to maintain pressure recording devices in good working order. (Cal. Code Regs., tit. 14, § 1724.10.4, subd. (a)(4).)

The one violation related to “1724.11(a)” is for failure to prevent any surface expression in UIC projects. (Cal. Code Regs., tit. 14, § 1724.11, subd. (a).)

The six violations related to “1724.13(a)” are for unauthorized injection and failure to cease injection in the affected injection well. (Cal. Code Regs., tit. 14, § 1724.13, subd. (a).)

The ten violations related to “1724.13(c)” are for failure to disconnect lines after loss of approval to inject. The loss of approval to inject may result from a variety of circumstances indicating potentially elevated risks with continued injection activity, such as the well becoming idle, not performing mechanical integrity testing (MIT), a well failing MIT, any observed indications of failure in well tubing, packer, or casing, or the occurrence of visible surface damage near the well. (Cal. Code Regs., tit. 14, § 1724.13, subd. (a) and (c).)

### **3.2 Enforcement Actions**

*Public Resources Code section 3114, subdivision (a)(9): The number of enforcement actions taken by DOC.*

During the reporting period, 16 UIC-related enforcement actions were undertaken by CalGEM. All these enforcement actions were Notices of Violations (NOVs). As circumstances allow, CalGEM often uses the mechanism of a single enforcement action to address a group of multiple violations involving the same operator.

### **3.3 Shut-In Orders or Requests to Relinquish Permits**

*Public Resources Code section 3114, subdivision (a)(10): The number of shut-in orders or requests to relinquish permits and the status of those orders or requests.*

Under applicable regulations, wells may be effectively “shut-in,” via suspension of approval to inject, upon the occurrence of various prescribed triggering events. Some of these triggering events do not presuppose any “violation” by the operator, nor do they contemplate the issuance of an administrative order or a “request to relinquish” as a necessary step. (See, e.g., Cal. Code Regs., tit. 14, §§ 1724.6; 1724.10, subd. (i); 1724.11; 1724.13.) During the reporting period, there were 155 well shut-ins. From these shut-ins, one request to relinquish an injection well permit was accepted and filed in



WellSTAR. Subsequent inspection on May 5, 2023, confirmed that the well had been disconnected.

## 4. Administration

### 4.1 UIC Program Staffing

*Public Resources Code section 3114, subdivision (a)(11): The number, classification, and location of staff with work related to underground injection control.*

All staff with duties related to UIC partial or full time were identified and calculated into whole FTE (Full Time Equivalent) positions.

There has been an increase in positions during this reporting period because of an increase in positions granted to DOC to carry out UIC activities as part of the 2022/2023 California State Budget. As a result, the number of vacancies increased effective July 1, 2022, which were in the process of being filled during the reporting period.

### DEPARTMENT OF CONSERVATION

LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE)*	# of VACANCIES (FTE)*
Sacramento (HQ)	Supervising Oil & Gas Engineer	1 (0.40)	0 (0)
	Senior Oil & Gas Engineer <sup>1</sup>	1 (1.00)	0 (0)
	Associate Oil & Gas Engineer	8 (5.55)	4 (4.00)
	Research Data Specialist I	1 (0.10)	0 (0)
	Research Data Specialist II	2 (0.30)	0 (0)
	Research Data Analyst II	1 (0.05)	0 (0)
	Research Data Supervisor II	1 (0.05)	0 (0)
	Associate Environmental Planner (CEQA)	1 (0.6)	0 (0)
	Environmental Scientist (CEQA)	2 (1.5)	0 (0)
	Senior Environmental Scientist Supervisor (CEQA)	1 (0.3)	0 (0)
	Environmental Program Manager (CEQA)	1 (0.2)	0 (0)
	Attorney (Legal)	1 (0.5)	0 (0)



LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE)*	# of VACANCIES (FTE)*
HQ continued	Attorney III (Legal)	1 (0.5)	0 (0)
<b>HQ TOTAL</b>		<b>22 (11.05)</b>	<b>4 (4.00)</b>
<b>Long Beach (Southern District)</b>	Supervising Oil & Gas Engineer	2 (0.40)	0 (0)
	Senior Oil & Gas Engineer (Supervisor)	7 (1.75)	0 (0)
	Senior Oil & Gas Engineer (Specialist)	1 (0.95)	0 (0)
	Associate Oil & Gas Engineer	16 (8.00)	0 (0)
	Engineering Geologist	16 (3.20)	0 (0)
	Energy & Mineral Resources Engineer	1 (0.20)	0 (0)
<b>SOUTHERN DISTRICT TOTAL</b>		<b>43 (14.50)</b>	<b>0 (0)</b>
<b>Sacramento (Northern District)</b>	Senior Oil & Gas Engineer (Supervisor)	6 (1.18)	2 (0.80)
<b>Ventura/Orcutt (Northern District)</b>	Energy & Mineral Resources Engineer	2 (0.25)	1 (0.02)
	Engineering Geologist	19 (3.88)	8 (2.80)
	Office Assistant (Typist)	1 (0.02)	1 (0.02)
	Office Technician (Typist)	2 (0.06)	1 (0.03)
	Associate Governmental Program Analyst	1 (0.03)	0 (0)
<b>NORTHERN DISTRICT TOTAL</b>		<b>45 (10.57)</b>	<b>13 (3.67)</b>
<b>Bakersfield (Central District)</b>	Supervising Oil & Gas Engineer	2 (0.80)	1 (0.75)
	Senior Oil & Gas Engineer (Supervisor)	10 (4.25)	1 (0.60)
	Senior Oil & Gas Engineer (Specialist)	1 (0.65)	0 (0)
	Associate Oil & Gas Engineer	38 (22.80)	0 (0)
	Engineering Geologist	25 (8.03)	2 (1.60)
	Staff Services Manager	1 (0.15)	0 (0)
	Staff Services Manager II	1 (0.05)	0 (0)
	Staff Services Analyst	1 (0.90)	0 (0)



LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE)*	# of VACANCIES (FTE)*
Central continued	Office Technician (Typist)	1 (0.10)	0 (0)
<b>CENTRAL DISTRICT TOTAL</b>		<b>80 (37.73)</b>	<b>4 (2.95)</b>
<b>TOTAL – ALL DISTRICTS &amp; HQ</b>		<b>190 (73.85)</b>	<b>21 (10.62)</b>

Note: Figures shown outside parentheses are the number of staff per job classification contributing partial times performing UIC related tasks and the current CALGEM organizational chart vacancies.

<sup>1</sup> For the Senior Oil & Gas Engineer position in Sacramento (HQ), it was filled for the majority of the reporting period and the vacancy portion was being filled in by the Supervising Oil & Gas Engineer in Sacramento (HQ).

\* FTE: Full-Time Equivalent figures inside parentheses were based on an estimated percent of staff time spent performing UIC related tasks during the reporting period.

#### **STATE AND REGIONAL WATER BOARDS**

LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE)*	# of VACANCIES (FTE)*
<b>State Water Board (Sacramento)</b>	Senior Engineering Geologist	1	0
	Engineering Geologist / Water Resources Control Engineer	7	1
	Attorney	1	0
<b>STATE WATER BOARD TOTAL</b>		<b>9</b>	<b>1</b>
<b>Central Valley Regional Water Board (Fresno)</b>	Senior Engineering Geologist	1	0
	Engineering Geologist / Water Resources Control Engineer	10	2
<b>REGIONAL BOARD TOTAL</b>		<b>11</b>	<b>2</b>
<b>Central Coast Regional Water Board (San Luis Obispo)</b>	Senior Water Resources Control Engineer	1	0
	Engineering Geologist	4	1
<b>REGIONAL BOARD TOTAL</b>		<b>5</b>	<b>1</b>



LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE)*	# of VACANCIES (FTE)*
<b>Los Angeles Regional Water</b>	Engineering Geologist / Water Resources Control Engineer	3	0
<b>REGIONAL BOARD TOTAL</b>		<b>3</b>	<b>0</b>
<b>TOTAL – STATE &amp; REGIONAL WATER BOARDS</b>		<b>28</b>	<b>4</b>

Note: Figures for the Water Boards above are dedicated full-time to UIC. Position numbers include 10 additional positions received in 2022/2023.

## **4.2 UIC Program Vacancies**

*Public Resources Code section 3114, subdivision (a)(12): The number of staff vacancies for positions associated with underground injection control.*

See tables above in section [4.1 UIC Program Staffing](#).

## **5. Statutes & Regulations**

### **5.1 Statutory or Regulatory Changes to the UIC Program**

*Public Resources Code section 3114, subdivision (a)(13): Any state or federal legislation, administrative, or rulemaking changes to the Program.*

#### **5.1.1 Federal Legislation**

Nothing to report.

#### **5.1.2 State Legislation**

##### **5.1.2.1 Senate Bill 905**

Senate Bill (SB) 905 (Caballero, Ch. 359, Statutes of 2022) requires the California Air Resources Board (CARB) to establish a Carbon Capture, Removal, Utilization, and Storage program, to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage (CCUS) technology, and to adopt regulations to implement the program. The bill requires the California Geological Survey within DOC to establish the Geologic Carbon Sequestration Group to provide expertise and regulatory guidance to CARB. The Group is responsible for identifying high-quality locations for Class VI injection wells.



The bill also prohibits an operator from injecting carbon dioxide fluid produced by a CCUS project into a Class II injection well for purposes of enhanced oil recovery. This provision is codified in Public Resources Code section 3132.

### **5.1.2.2 Senate Bill 1137**

SB 1137 (Gonzalez, Ch. 385, Statutes of 2022) would have prohibited, commencing January 1, 2023, CalGEM from approving any Notice of Intention for oil and gas wells within a 3,200-foot health protection zone from defined sensitive receptors, with certain exceptions. Sensitive receptors include residences; education resources; community resource centers; youth centers; health care facilities; live-in housing; and any building housing a business that is open to the public.

Operators submitting a Notice of Intention would be required to submit a sensitive receptor inventory and map or certify their absence. If a Notice of Intention were approved within a health protection zone, an indemnity bond sufficient to pay for plugging and abandoning the well, and decommissioning production facilities, would be required in specified cases. The bill also outlines health, safety, environmental and reporting requirements for operators in a health protection zone, and reporting requirements for all operators. Although these changes do not specifically target injection wells within the scope of CalGEM's UIC program, as general requirements, their effects would extend to the drilling and operation of injection wells.

These provisions are codified in Public Resources Code sections 3280 through 3291.

The provisions of SB 1137 are stayed by operation of law pending a vote on a referendum against that legislation. As a result, CalGEM's first emergency regulations implementing SB 1137 are also suspended by operation of law.

### **5.1.3 Administrative**

On January 26, 2023, the Court of Appeal for the Fifth District suspended operation of Kern County's Oil and Gas Ordinance, Kern County Code Chapter 19.98, pending further order of the Court of Appeal. This resulted in CalGEM again becoming the CEQA lead agency for reviewing oil and gas applications. This followed a number of other recent court determinations:

- On October 22, 2021, the court in *Vaquero Energy Inc. v. County of Kern*, Kern County Superior Court Nos. BCV-15-101645-GP (consolidated with 10053-GP, and 100536-GP), ordered Kern County to suspend operations under the Ordinance, and ordered Kern County to cease reviewing and approving oil and gas permits under the Ordinance unless and until the court determines that the Ordinance complies with CEQA requirements. With that decision, CalGEM became the CEQA lead agency for reviewing oil and gas applications.



- Then, on November 2, 2022, the Superior Court issued a new order lifting the previously ordered suspension of the operation of the Ordinance. Accordingly, Kern County resumed permitting of oil and gas operations as the CEQA lead agency in unincorporated Kern County. CalGEM resumed acting as a responsible agency under CEQA until the January 2023 decision.
- On February 2, 2023, CalGEM issued Notice to Operators number 2023-02 to inform operators that those who submitted a Notice of Intention or application associated with a well within the jurisdiction of Kern County, with a job card issued by Kern County and recognizing CalGEM as the responsible agency, and for which a permit has not been received, would be required to resubmit designating CalGEM as the lead agency and with revised information to support CalGEM's review. (Notice to Operators 2023-02).

Stepping into the lead agency role has again increased the scope and complexity of oversight functions for CalGEM staff.

## **5.1.4 UIC Regulatory Changes**

### **5.1.4.1 Senate Bill 1137 First Emergency Implementation Regulations**

DOC's SB 1137 First Emergency Implementation Regulations ensured the immediate implementation of health protection zones for all oil and gas operations in the state that are near sensitive receptors (see Section 5.1.2 State Legislation above). The regulations, found in California Code of Regulations, title 14, sections 1765 through 1765.10 became effective on January 6, 2023, but were subsequently suspended by operation of law. Although these changes do not specifically target injection wells within the scope of CalGEM's UIC program, as general requirements, their effects would extend to the drilling and operation of injection wells.

## **5.2 CalGEM UIC Projects Reviewed in Each District**

*Public Resources Code section 3114, subdivision (a)(14): The number of underground injection control projects reviewed for compliance with statutes and regulations in each district and a summary of findings from project reviews completed during the reporting period, including any steps taken to address identified deficiencies.*

Consistent with its Revised Memorandum of Agreement (Revised Memorandum of Agreement 2021), CalGEM coordinates with the Water Boards' staff in the review of existing active UIC projects to ensure compliance of the project with the current regulatory requirements. It includes project file examination of each active project to determine completeness and updating necessary documentation required by regulation, in addition to updating the terms and conditions of the PAL to ensure each project is effectively preventing damage to life, health, property, and natural resources.



As of March 31, 2023, CalGEM has 186 active UIC projects under review in WellSTAR. This includes 50 reviews for which districts and HQ have agreed that the review is technically complete, and the project has been forwarded to the State Water Board for their feedback.

DISTRICT	Reviews Complete	Under Review In WellSTAR
Southern	6	58
Central	0	69
Northern	0	59
<b>TOTAL</b>	<b>6</b>	<b>186</b>

### **Summary of Findings and Steps to Address Deficiencies:**

For project reviews completed during this reporting period, deficiency letters were sent to operators requesting missing data. As a result, all project data was updated to become compliant with 2019 UIC regulatory requirements. Commonly requested data for these projects included:

- Updated Zone of Endangering Influence (ZEI) calculations based on empirically observed parameters (including actual injection intervals from radioactive (RA) surveys, observed reservoir pressures, and injection rates).
- Updated isobar maps with validated pressure data.
- Material Balance / Voidage replacement ratio (VRR) graphs and data (historical & forecasted where available).
- Detailed descriptions of the overlying USDW's and method of determination.
- Detailed explanations of geological features and impacts on fluid flow/migration (e.g., faults).
- Updated and accurate wellbore diagrams.
- Impacts of overlying Area of Review (AOR) as well as injection/production interference effects.
- Updating all figure/graphs/tables/maps to fall into compliance with CCR section 1724.7.





- Remediation strategies or detailed monitoring plans identifying operator proposals to ensure protection of USDW's where conduits exist via wellbores.

### **5.3 UIC Projects Not Yet Reviewed for Compliance**

*Public Resources Code section 3114, subdivision (a)(15): The number of underground injection control projects that have not been reviewed for compliance with applicable statutes and regulations within the prior two years.*

As of March 31, 2023, 573 UIC projects had not been reviewed for compliance with applicable statutes and regulations within the prior two years, down from 628 reported last year. CalGEM has made at least initial data requests on most of the 774 active UIC projects.

### **5.4 UIC Summary of Significant Milestones**

*Public Resources Code section 3114, subdivision (a)(16): Summary of significant milestones in the compliance schedule agreed to with the US EPA, as indicated in the March 9, 2015, letter to CalGEM and the State Water Board from the US EPA, including, but not limited to, regulatory updates, evaluations of injection wells, and aquifer exemption applications.*

#### **5.4.1 Aquifer Exemptions**

CalGEM and the State Water Board continue to provide the US EPA and the California Legislature with regular updates on the progress of the AE process.

In a letter dated September 16, 2021, the US EPA expressed concern with California's pace in fulfilling its obligations specified in the March 2015 compliance plan. The letter requested a revised schedule for submitting the nine outstanding AE packages that are not in compliance with the Safe Drinking Water Act (SDWA) to US EPA by no later than September 30, 2022.

An initial schedule for completing the nine remaining packages was submitted to US EPA in December 2021. The State was largely able to stay on track with commitments made to US EPA, and where it has not, it has provided regular communication to US EPA on progress overcoming delays.

Following is a summary update of the nine AE packages:

- Without active injection within the proposed AE boundaries, Oxnard and Mount Poso (Dorsey Area) AE packages are no longer out of compliance with the SDWA.
- There are seven remaining non-compliant AE packages. Four of these seven AE



packages have been submitted to US EPA, and include Lynch Canyon-Lanigan Sands, Sespe, Lompoc, and Holser AE packages. The Holser and Lompoc AE packages were submitted during the reporting period.

- Midway Sunset, Kern River, and Cat Canyon AE packages remain to be submitted to US EPA. A top priority for CalGEM is to complete the currently ongoing conduit analyses, an additional well integrity evaluation to identify and remediate potential fluid conduits within a proposed AE area that is overlain by beneficial use groundwater aquifers, for these AE packages. (Mid-Year Update Letter to US EPA. August 26, 2022; Transmittal Letter to US EPA – Holser Oil Field. December 23, 2022; Transmittal Letter to US EPA – Lompoc Oil Field. December 23, 2022)

Additional information on each AE package is provided in Section 2.1.

### **5.4.2 Regulatory Updates**

The regulatory changes discussed in the March 9, 2015, letter to CalGEM and the State Water Board from the US EPA were achieved via two rulemaking actions completed in 2016 and 2019, respectively. There were no regulatory developments during this reporting period specifically related to the compliance schedule milestones discussed in the March 9, 2015, letter.

### **5.4.3 Evaluations of Injection Wells**

During the reporting period, CalGEM continued its regulatory oversight of underground injection operations consistent with applicable law, taking appropriate actions as necessary to prevent damage to USDW and other natural resources. See Section 5.3 for details of enforcement actions.

During the reporting period, the Central Coast Regional Water Quality Control Board worked with CalGEM and oilfield operators to investigate 9 UIC wells that failed MIT between April 1, 2022, and March 31, 2023. The wells were located in the San Ardo and Cat Canyon oil fields.

## **5.5 UIC Review Panel**

*Public Resources Code section 3114, subdivision (a)(17): Summary of activities undertaken by the underground injection control review panel established pursuant to Section 46 of Chapter 24 of the Statutes of 2015.*

Pursuant to Senate Bill 83 (Committee on Budget and Fiscal Review, Ch. 24, Statutes of 2015), the Secretary of the Natural Resources Agency and the Secretary for Environmental Protection appointed an independent review panel to evaluate the



regulatory performance of the administration of the UIC Program and make recommendations on how to improve its effectiveness by evaluating resource needs, statutory or regulatory changes, as well as Program organization.

Following the requirements of the legislation, the Panel is comprised of a diverse group of individuals with expertise and scientific background in geology, toxics, oil and gas development, public health, and the environment, as well as representatives from agricultural and environmental justice perspectives.

Additionally, the Panel is required to seek input from a broad range of stakeholders with a diverse range of interests affected by state policies and the general public.

The Panel has the following tasks:

- Observe, comment on, and review the April 2020 Peer Review conducted by the Groundwater Protection Council, a nonprofit organization whose members consist of state groundwater and UIC regulatory agencies.
- Seek input on the findings of the Peer Review from a broad range of stakeholders and the public.
- Issue an independent final evaluation and recommendations to improve the regulatory Program.

The Panel's discussions and process are being facilitated by the Lawrence Berkeley National Laboratory (LBNL).

Funds supporting the SB 83 work on the previous contract with LBNL were exhausted and the contract expired in June 2021. CalGEM has worked to put a new multi-year contract in place with LBNL that includes completing the SB 83 panel work.

The subtasks below are required to complete the work of the SB 83 independent review panel to evaluate the performance of CalGEM's administration of the UIC Program. It is anticipated work will be completed within the next reporting period.

- Continue evaluation and required updates of the performance of CalGEM's administration of the UIC Program.
- Review recent audit reports on the UIC Program by Groundwater Protection Council and Department of Finance Office of State Audits and Evaluations (OSAE), and
- Prepare a written evaluation with recommendations in accordance with SB 83 aimed to improve the UIC regulatory Program.



## APPENDIX A – REFERENCES & DATA SOURCES

### CalGEM

- CalGEM Statutes and Regulations (January 2023):

<https://www.conservation.ca.gov/index/Pages/California-Geologic-Energy-Management-Division-Statutes-and-Regulations.aspx>

- Revised Memorandum of Agreement between CalGEM (referred to as the Department of Conservation Division of Oil, Gas, and Geothermal Resources ("Division")) and the State Water Board (last updated with the addition of a new "Attachment 3" circa December 2021):

[https://www.conservation.ca.gov/calgem/general\\_information/Documents/2020.10.12\\_Revised\\_MOA\\_with\\_the\\_State\\_Water\\_Board.pdf](https://www.conservation.ca.gov/calgem/general_information/Documents/2020.10.12_Revised_MOA_with_the_State_Water_Board.pdf)

- Well Statewide Tracking and Reporting System (WellSTAR), an electronic database used to maintain, monitor, and track well information:

[https://www.conservation.ca.gov/calgem/for\\_operators/Pages/WellSTAR.aspx](https://www.conservation.ca.gov/calgem/for_operators/Pages/WellSTAR.aspx)

- Notice to Operators 2022-06. Kern County Final Supplemental Recirculated Environmental Impact Report Suspension Lifted; Guidance for CEQA Compliance for Proposed Operations in Kern County. November 16, 2022.

[https://www.conservation.ca.gov/calgem/for\\_operators/Documents/NOTICE%20TO%20OPERATORS%202022-06%20Kern%20SREIR%20ADA.pdf](https://www.conservation.ca.gov/calgem/for_operators/Documents/NOTICE%20TO%20OPERATORS%202022-06%20Kern%20SREIR%20ADA.pdf)

- Notice to Operators 2023-02. Notice of Appellate Order Regarding Kern County Code Chapter 19.98; Guidance for CEQA Compliance for Proposed Operations in Kern County. February 2, 2023:

[https://www.conservation.ca.gov/calgem/for\\_operators/Documents/2023-02%20NOTICE%20TO%20OPERATORS%20Kern%20SREIR%20ADA.pdf](https://www.conservation.ca.gov/calgem/for_operators/Documents/2023-02%20NOTICE%20TO%20OPERATORS%20Kern%20SREIR%20ADA.pdf)



## WATER BOARDS

- Bi-weekly UIC Project Review Status Reports:

[https://geotracker.waterboards.ca.gov/uic\\_project\\_tracking\\_report](https://geotracker.waterboards.ca.gov/uic_project_tracking_report)

- GeoTracker, a public database used to maintain, monitor, and track a variety of groundwater data, including UIC well information:

<https://geotracker.waterboards.ca.gov/>

- State Water Board Oil and Gas Unit's Aquifer Exemption Status, an internal Excel workbook specifically used to track the progress of aquifer exemption application reviews, interagency communication, and decision milestones.



## APPENDIX B – PUBLIC RESOURCES CODE § 3114

**§ 3114.** (a) By July 30, 2019, and annually thereafter, the Department of Conservation, in consultation with the State Water Resources Control Board, shall report to the fiscal and relevant policy committees of the Legislature on the Underground Injection Control Program. The report shall include, but is not limited to, all the following about activities in the previous 12 months:

- (1) The number and location of underground injection control project approvals issued by the department, including projects that were approved but subsequently lapsed without having commenced injection.
- (2) The monthly average number of pending project applications.
- (3) The average length of time to obtain an underground injection control project approval from date of receipt of complete application to the date of issuance.
- (4) The average amount of time to review an underground injection control project proposal by the division and the average combined review time by the State Water Resources Control Board and regional water quality control boards for each proposed underground injection control project.
- (5) The number of project proposals pending for over one year.
- (6) A list of pending aquifer exemptions, if any, and their status in the review process.
- (7) The average length of time to process an aquifer exemption and the average amount of time to review a proposed aquifer exemption by the division and the average combined review time by the State Water Resources Control Board and regional water quality control boards for each aquifer exemption proposal.
- (8) The number and description of underground injection control related violations identified.
- (9) The number of enforcement actions taken by the department.
- (10) The number of shut-in orders or requests to relinquish permits and the status of those orders or requests.
- (11) The number, classification, and location of staff with work related to underground injection control.



- (12) The number of staff vacancies for positions associated with underground injection control.
  - (13) Any state or federal legislation, administrative, or rulemaking changes to the Program.
  - (14) The number of underground injection control projects reviewed for compliance with statutes and regulations in each district and a summary of findings from project reviews completed during the reporting period, including any steps taken to address identified deficiencies.
  - (15) The number of underground injection control projects that have not been reviewed for compliance with applicable statutes and regulations within the prior two years.
  - (16) Summary of significant milestones in their compliance schedule agreed to with the United States Environmental Protection Agency, as indicated in the March 9, 2015, letter to the division and the state board from the United States Environmental Protection Agency, including, but not limited to, regulatory updates, evaluations of injection wells, and aquifer exemption applications.
  - (17) Summary of activities undertaken by the underground injection control review panel established pursuant to Section 46 of Chapter 24 of the Statutes of 2015.
- (b) This section shall become inoperative on October 1, 2024, and as of January 1, 2025, is repealed.

*(Amended by Stats. 2019, Ch. 771. Section inoperative October 1, 2024. Repealed as of January 1, 2025, by its own provisions.)*





## Contact

### CALIFORNIA GEOLOGIC ENERGY MANAGEMENT DIVISION

#### Headquarters

715 P Street, MS 1803, Sacramento, CA 95814

(916) 445-9686 | Fax: (916) 319-9533

[CalGEMPublicTransparencyOffice@conservation.ca.gov](mailto:CalGEMPublicTransparencyOffice@conservation.ca.gov)

GIS Inquiries: [CalGEMGISUNIT@conservation.ca.gov](mailto:CalGEMGISUNIT@conservation.ca.gov)

#### Central District

11000 River Run Blvd., Bakersfield, CA 93311

(661) 322-4031 | Fax: (661) 861-0279

#### Northern District

715 P Street, MS 1804, Sacramento, CA 95814

(916) 322-1110 | Fax: (916) 445-3319

#### Orcutt Office

195 S. Broadway, Suite 101, Orcutt, CA 93455

(805) 937-7246 | Fax: (805) 937-0673

#### Ventura Office

1000 S. Hill Road, Suite 116, Ventura, CA 93003

(805) 937-7246 | Fax: (805) 654-4765

#### Southern District

3780 Kilroy Airport Way, Suite 400, Long Beach, CA 90806

(562) 637-4400 | Fax: (562) 424-0166

