



Geologic Energy Management Division

UNDERGROUND INJECTION CONTROL PROGRAM REPORT

PERMITTING & PROGRAM ASSESSMENT

Reporting Period: April 1, 2021, to March 31, 2022

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

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

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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 Division of Oil, Gas, and Geothermal Resources), 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, Inland, and Southern) to best serve the needs of the State. During the reporting period, the previous Northern and Coastal districts were merged into the current Northern District. 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 fourth 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, 2021, to March 31, 2022. The first report submitted to the Legislature included information covering only a 6-month period (October 1, 2018, to March 31, 2019). The truncated initial report period was set intentionally to allow continuity from the final [Senate Bill 83 \(Ch. 24, Statutes of 2015\)](#) requirements that reported UIC activities from April 1 to September 30, 2018. It also allowed synchronization with the US EPA 7520 report, which is the source of data for items referenced in Public Resources Code section 3114, subdivision (a)(8) through (a)(10). The final report will be submitted on July 30, 2024.

The following are key facts from this report:

- A total of seven project applications were approved during this reporting period.
- Beginning from receipt of application to approval and issuance of the Project Approval Letter (PAL), CalGEM's average project review time was 971 days, or about 32 months. This is an improvement from the prior year's average of 36 months. Current year approvals benefitted from a reduction of rework related to the implementation of updated regulations in 2019. Applications approved during the prior period were submitted in 2017 and 2018, well before the regulations became effective.
- Beginning from the date CalGEM's district office deemed UIC project applications complete, the average time to approval was 781 days. The detailed technical review commenced once an application package was deemed complete. The average review time of UIC project applications for the State Water Resources Control Board was 66 days.
- During the reporting period, the monthly average number of pending project applications (New, Expansion, Project by Project review/Expansion) was 93. As of March 31, 2022, 70 out of these 93 applications had been pending for over one year.
- During the reporting period, there were 15 pending aquifer exemption (AE) applications. CalGEM sent one AE application to the US EPA – Sespe. Fourteen other AE proposals were pending as of March 31, 2022. No US EPA approval was received during the reporting period.



- A total of 1143 enforcement actions were taken to address and bring into compliance 1754 violations. One enforcement action may cover multiple violations.
- There were 29 well shut-ins during this period. Well shut-ins on the record include two voluntary relinquishments of injection permits plus 27 shut-ins as wells automatically lost injection approval under circumstances prescribed in the updated UIC regulations.
- CalGEM had approximately 75 staff working full-time on UIC tasks during the reporting period. There were 9 full-time UIC vacancies.
- The State Water Resources Control Board and regional water quality control boards had 18 staff positions working on UIC tasks during the reporting period. The State Water Resources Control Board had two vacancies during the reporting period.
- Internal UIC review of projects for compliance with applicable statutes and regulations has been completed for 23 projects. These projects are awaiting input from the State Water Resources Control Board, regional water quality control boards, and CalGEM's CEQA unit. As noted above, one Project by Project review was fully approved, and an updated PAL was issued.
- Last year's report included all projects for which an initial data request had been made to the operator. It was subsequently determined that this was not a valuable milestone. As of this report, the basis of "ongoing" (Project by Project) reviews is changed to the entry of the project into WellSTAR. This change is intended to improve tracking efficiency and transparency of reviews in progress. As of March 31, 2022, 628 projects had not been reviewed for compliance with applicable statutes and regulations within the last two years. As noted in last year's report, preliminary data gathering is underway for most of CalGEM's 805 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.

SB 1493 extended the reporting requirements outlined in SB 83 (Committee on Budget and Fiscal Review, Ch. 24, Statutes of 2015), changed the reporting frequency from semi-annual to annual, and added eight new data points in addition to those required by SB 83.

This fourth SB 1493 report covers the period from April 1, 2021, to March 31, 2022, 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 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 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 aquifer exemption
 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



UNDERGROUND INJECTION CONTROL PROGRAM

1. 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 seven UIC project applications. This includes five new UIC projects, one expansion of an existing project, and one Project by Project review. No newly approved project application lapsed without having commenced injection.

LOCATION COUNTY	# OF UIC PROJECTS APPROVED
Southern District Office	0
Inland District Office Kern (6)	6
Northern District Office Contra Costa (1)	1
TOTAL	7

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 Project Approval Letter (PAL). Effective with this report, projects are only added to the “pending” list when a project application is submitted in WellSTAR. On average, 93 UIC project applications were pending every month during the reporting period. For consistency, applications for Project by Project reviews that do not include an expansion component are not included in this number.

During the reporting period, no additional UIC project applications were sent to Lawrence Livermore National Laboratory (LLNL) for their independent scientific review. A total of six projects were sent to LLNL during the prior two reporting periods for review before the final approval and issuance of the PAL. The three previously outstanding reviews were successfully concluded during the reporting period.



During the reporting period, CalGEM acted as the lead agency for CEQA permitting in Kern County outside of the interval from April 7, 2021, until October 6, 2021. 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 781 days was needed to obtain approval during this reporting period. This is slightly above the 757 days during the previous reporting period. The total time from submission of the application to approval averaged 971 days. This is a reduction from the prior report average of 1134 days.

While changes relative to the prior year are relatively modest, implementation of the updated UIC MOA checklist and WellSTAR resulted in less time for a project to be deemed complete. The UIC MOA checklist is part of the 2018 Revised Memorandum of Agreement (MOA) between CalGEM and the State Water Board and regional water quality control boards (Water Boards). It is also noteworthy that projects approved during the prior reporting period were submitted before the implementation of current UIC regulations on April 1, 2019. As such, they were subject to rework to align them with current regulations.

UIC project applications undergo cursory reviews to ensure the dataset is complete and meets the regulatory requirements. Districts will not start detailed technical reviews until the package is verified complete. Project applications requiring an aquifer exemption (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 CalGEM average review time for UIC project proposals was 905 days. This is a reduction from the previous average of 1088 days. CalGEM review time begins the day the application is submitted and concludes when the project approval letter 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 66 days. The Water Boards' review begins when an application is received from CalGEM. The Water 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, 2022, 70 UIC project proposals had been pending for over one year. Forty-five of those 70 proposals were still under CalGEM review which, when completed, will be submitted to the Water Boards. Thirty-two of the 70 applications were awaiting Operator's input. The remaining 25 UIC project proposals were still under Water Boards' review.

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 applications during the reporting period. In a letter dated September 16, 2021, the US EPA expressed support for the State's proposal to conduct conduit analysis to assess potential fluid migration where a proposed aquifer exemption area is overlain by beneficial use aquifers. The US EPA also stated that the conduit analysis should be conducted before submitting the aquifer exemption package to the US EPA for review. The status of the applications, including any required conduit analysis, as of March 31, 2022, is provided below.



AQUIFER EXEMPTION STATUS AS OF MARCH 31, 2022

Lynch Canyon (Lanigan)	AE package was submitted to US EPA on 2/26/2020. CalGEM responding to US EPA questions and updating documentation.
Sespe	AE package was submitted to US EPA on 11/12/2021. CalGEM responding to US EPA questions and updating documentation.
Cat Canyon	CalGEM has requested and received wellbore information from the operators and had requested additional information at report time to perform conduit analysis. Conduit analysis is ongoing.
Holser	State Water Board preliminary concurrence was received on 12/7/2018. A public comment period consistent with Public Resources Code section 3131, subdivision (b), was provided, including a hearing to receive public comments on 3/29/2022.
Oxnard	CalGEM accepted a recommendation from the State Water Board to perform conduit analysis before scheduling a public comment period and public hearing. Subsequently, in light of evolving operator plans not to continue injection in the area of this contemplated AE, CalGEM decided to formalize suspension of injection approval via a regulatory notice process for all wells in the area that were completed into a potential USDW zone. The regulatory notice implementing this suspension of injection approval was issued and took effect in April of 2022.
Lompoc	State Water Board preliminary concurrence was received on 7/27/2021. A public comment period consistent with Public Resources Code section 3131, subdivision (b), was scheduled, including a hearing to receive public comments set for 4/12/2022.
Midway-Sunset II (Tulare)	CalGEM requested and received wellbore information from the operator to perform conduit analysis. Conduit analysis is ongoing.



Mt. Poso (Dorsey Area)	CalGEM requested and received wellbore information from the operator to perform conduit analysis. Operator submitted the revised application on 2/22/2022.
Kern River	CalGEM requested and received wellbore information from the operator to perform conduit analysis. CalGEM conduit analysis completed and shared with State Water Board 03/22/2022.
Casmalia	Updated application received 5/7/20. Returned to Operator 6/5/20 for revisions.
Deer Creek	This application is under CalGEM's review. The project was transferred to the new operator during the report period. No activity since.
Round Mountain (South Area)	Under review by CalGEM and the State Water Board. CalGEM continues meeting with the operator, State Water Board, and local water agencies.
Northeast Edison	The proposal is still in an early stage of review by CalGEM. District waiting for operator responses on feedback and additional requirements sent on 5/20/2019.
North Antelope Hills	CalGEM received an updated application on 10/06/2021. Under review by CalGEM.
Lynch Canyon – D Sands	Application received from Operator in March 2020. The application had been on hold pending the collection of a formation water sample by operator. Water sample was collected on 01/18/2022.



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 State Water Board completed reviews of and submitted to US EPA the Sespe AE proposal. US EPA approvals of the Sespe and previously submitted Lynch Canyon, Lanigan Sands AE proposals are pending.

No US EPA approvals of aquifer exemptions were received during the reporting period.

The CalGEM review time for the Sespe AE proposal was approximately 63 months. CalGEM review time begins the day the application package is received and concludes the day it is submitted to the US EPA. 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 Sespe AE proposal was approximately 27 months. Water Boards' review time begins the day a complete aquifer exemption proposal is received from CalGEM and concludes when a final concurrence letter is issued by the State Water Board. 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 violations identified.

During the reporting period, CalGEM identified 1754 violations, up from 365 violations last year. The change represents the combined effect of increased staffing, improved work processes, and the removal of pandemic-related restrictions on field inspections.



VIOLATIONS IDENTIFIED

Unauthorized Injection / Mechanical Integrity	477
Operations and Maintenance	883
Plugging and Abandonment	2
Monitoring and Reporting Violations	910
Other Violations	82
TOTAL	1754

3.2 Enforcement Actions

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

During the reporting period, 1143 UIC-related enforcement actions were undertaken by CalGEM. As circumstances allow, CalGEM often uses the mechanism of a single enforcement action to address a group of multiple violations involving the same operator.

ENFORCEMENT ACTIONS TAKEN

Notice of Violations Issued	1114
Consent Agreement	0
Administrative Orders	2
Well Shut-Ins	27
Other Enforcement Actions	0
TOTAL	1143

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 also 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.)

Under the updated UIC regulations, a failed Mechanical integrity test (MIT) automatically results in a suspension of injection approval. A total of 27 wells failed MITs and automatically lost injection approval during the reporting period. Enforcement action is only considered if the shut-in requirement (or other applicable requirements) is not acted upon by the operator.



In addition, two requests to relinquish injection well permits were accepted and filed in WellSTAR. Subsequent inspection on 4/19/2022 confirmed that the wells 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.

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	1 (1.00)	0 (0)	
	Associate Oil & Gas Engineer	4 (4.00)	1 (1)	
	Research Data Specialist 1	1 (0.20)	0 (0)	
	Research Data Specialist 2	1 (0.15)	0 (0)	
	Research Data Analyst 2	1 (0.05)	0 (0)	
	Research Data Supervisor 1	1 (0.05)	0 (0)	
	Research Data Supervisor 2	1 (0.05)	0 (0)	
	Research Data Analyst 1 (Data Mgt., Research & Special Projects)	1 (0.10)	0 (0)	
	Engineering Geologist (Data Mgt., Research & Special Projects)	1 (0.30)	0 (0)	
	Associate Environmental Planner (CEQA)	1 (1.00)	0 (0)	
	Attorney (Legal)	1 (0.5)	0 (0)	
	Attorney III (Legal)	1 (0.5)	0 (0)	
	Staff Services Analyst (Program Support Unit)	1 (0.4)	0 (0)	
	HQ TOTAL		17 (8.70)	1 (1)



LOCATION	JOB CLASSIFICATION	# of POSITIONS (FTE*)	# of VACANCIES (FTE*)
Long Beach (Southern District)	Supervising Oil & Gas Engineer	2 (0.55)	0 (0)
	Senior Oil & Gas Engr. (Supervisor)	7 (2.62)	0 (0)
	Senior Oil & Gas Engr. (Specialist)	1 (0.95)	0 (0)
	Associate Oil & Gas Engineer	16 (9.89)	0 (0)
	Engineering Geologist	16 (3.05)	0 (0)
	Energy & Mineral Resources Engr.	2 (0.4)	0 (0)
	DISTRICT TOTAL	44 (17.5)	0 (0)
Sacramento, Ventura, Orcutt (Northern District)	Senior Oil and Gas Engineer (Sup.)	4 (1.45)	1 (0.4)
	Associate Oil & Gas Engineer	11 (4.85)	1 (0.5)
	Energy & Mineral Resources Engr.	2 (0.20)	1 (0.02)
	Engineering Geologist	16 (2.84)	7 (2.45)
	Office Assistant (Typist)	1 (0.02)	1 (0.03)
	Office Technician (Typist)	1 (0.03)	2 (0.06)
	Associate Gov. Program Analyst	1 (0.03)	0 (0)
DISTRICT TOTAL	36 (9.4)	13 (3.46)	
Bakersfield (Inland District)	District Deputy	1 (0.3)	0 (0)
	Supervising Oil & Gas Engineer	3 (1.4)	0 (0)
	Senior Oil & Gas Engineer (Sup.)	11 (4.85)	1 (0.3)
	Senior Oil & Gas Engineer (Spec.)	1 (0.65)	1 (1)
	Associate Oil & Gas Engineer	35 (19.5)	0 (0)
	Engineering Geologist	31 (10.76)	1 (1)
	Energy & Mineral Resources Engr.	0 (0)	1 (1)
	Staff Services Manager I	1 (0.13)	0 (0)
	Staff Services Manager II	1 (0.05)	0 (0)
	Staff Services Analyst	2 (1.05)	0 (0)
	Oil & Gas Technician II	0 (0)	1 (1)
	Office Technician (Typist)	1 (0.25)	0 (0)
DISTRICT TOTAL	87 (38.9)	5 (4.3)	
TOTAL – ALL DISTRICTS AND HQ		184 (74.5)	19 (8.8)

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.

* 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	POSITIONS	VACANCIES
State Water Board (Sacramento)	Senior Engineering Geologist	1	0
	Engineering Geologist / Water Resources Control Engineer	5	2
	Attorney	1	0
	STATE WATER BOARD TOTAL	7	2
Central Valley Regional Water Board (Fresno)	Senior Engineering Geologist	1	0
	Engineering Geologist / Water Resources Control Engineer	5	0
	REGIONAL BOARD TOTAL	6	0
Central Coast Regional Water Board (San Luis Obispo)	Senior Water Resources Control Engineer	1	0
	Engineering Geologist	2	0
	REGIONAL BOARD TOTAL	3	0
Los Angeles Regional Water Board	Engineering Geologist / Water Resources Control Engineer	2	0
	REGIONAL BOARD TOTAL	2	0
	TOTAL – STATE AND REGIONAL BOARDS	18	2

Note: Figures for the Water Boards above are dedicated full-time to UIC.

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

Nothing to report.

5.1.3 Administrative

In mid-2021, CalGEM reorganized its districts from four to three – Coastal and Northern Districts merged to form a new Northern District. The change brings the new Northern District into parity with the other two districts, Southern and Inland, in terms of staff size and leadership structure.

On October 22, 2021, the court in *Vaquero Energy Inc. v. County of Kern*, Kern County Superior Court Nos. BCV-15-101645-GP, -10053-GP, and 100536-GP, ordered Kern County to suspend the operation of the “Supplemental Recirculated Environmental Impact Report (2020/2021) for Revisions to the Kern County Zoning Ordinance – 2020 (A), focused on Oil and Gas Local Permitting” (Kern SREIR), which had been approved on March 8, 2021, with an effective date of April 7, 2021. The approval of this Kern SREIR followed the effective suspension of an earlier Kern County zoning ordinance that enabled a streamlined process for county approval of new oil and gas developments by the Fifth District Court of Appeals ruling in *King and Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814.

Kern County was ordered to cease reviewing and approving oil and gas permits under the Kern SREIR unless and until the court determines that the Kern SREIR complies with CEQA requirements. The court stated the order did not impact the validity of permits issued under the Kern SREIR on or before October 6, 2021.

Before the ruling, consistent with applicable law, as part of its process for “responsible agency” CEQA compliance associated with UIC project approvals in Kern County, CalGEM relied on the environmental impact report for the ordinance prepared by Kern County. One consequence of the ruling was that CalGEM again became obliged to step in for Kern County as the CEQA lead agency for UIC project approval



determinations.

On November 2, 2021, CalGEM issued Notice to Operators number 2021-06 to inform operators that:

- For notices of intent (NOIs) and other applications submitted to CalGEM with job cards issued by Kern County under the Kern SREIR, CalGEM would continue its CEQA review process as a responsible agency under CEQA. However, CalGEM's approval of the NOI or application would be conditional and would allow the operator to proceed only if the court determines that the supplemental environmental impact report supporting the Kern SREIR complies with CEQA.
- For operators who submit an NOI or application without a job card issued by Kern County, CalGEM will act as the Lead Agency under CEQA for these submissions.

(Available: https://www.conservation.ca.gov/calgem/for_operators/Documents/2021-06%20NTO%20final.pdf)

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

No relevant regulatory changes during the reporting period.

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.

Last year's report included all projects for which an initial data request had been made to the operator. It was subsequently determined that this was not a valuable milestone. As of this report, the basis of "ongoing" reviews is changed to the entry of the project into WellSTAR. This change is intended to improve the tracking efficiency and transparency of reviews in progress. However, the number of reviews in progress is significantly lower as a result.

Consistent with its Revised Memorandum of Agreement, CalGEM coordinates with State Water Board and regional water quality control board staff in the review of existing UIC projects.

As of March 31, 2022, CalGEM had 166 active UIC projects under review in WellSTAR. This includes 23 reviews for which districts and headquarters (HQ) have



agreed that the review is technically complete, and the project has been forwarded to the State Water Board for their feedback.

DISTRICT	Completed	In WellSTAR
Southern	0	59
Inland	1	57
Northern	0	50
TOTAL	1	166

Summary of Findings and Steps to Address Deficiencies:

- A review of Project 0500012 was completed on 05/23/2021. The Project Approval Letter effective on that date includes pressure monitoring and a pressure limit to improve assurance that injected fluids will be confined to the approved zone. Project documentation has been updated to reflect the UIC regulations adopted on April 1, 2019.
- Highlights from reviews in progress include:
 - On a project with several potential conduits, CalGEM accepted a Monitoring and Remediation plan to demonstrate that injected fluid will be confined to the injection zone, while also remediating potential conduits over a scheduled period of several years.
 - Missing pressure data and updated Zone of Endangering Influence (ZEI). Operators were requested to submit new ZEI calculations.
 - Fracture gradient and Maximum Allowable Surface Injection Pressure (MASIP) needed re-evaluation. Operators were required to conduct step-rate tests and submit results to determine MASIP.
 - Determination/evaluation for Base of Freshwater (BFW) and Underground Source of Drinking Water (USDW) required. Operators were required to submit documentation i.e., electrical logs to confirm the presence/absence of BFW/USDW.
 - Insufficient pressure data to demonstrate containment relative to nearby USDW. Operator submitted additional data to the District.



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, 2022, 628 UIC projects had not been reviewed for compliance with applicable statutes and regulations within the prior two years. As noted earlier, this number reflects a more rigorous standard for a review in progress. Last year's report included all projects for which an initial data request had been made to the operator. It was subsequently determined that this was not a valuable milestone. As of this report, the basis of ongoing reviews and projects that have not been reviewed for compliance with applicable statutes and regulations within the prior two years is changed to the entry of the project into WellSTAR. This change is intended to improve the tracking efficiency and transparency of reviews in progress. As a result, the number of UIC projects that had not been reviewed for compliance with applicable statutes and regulations within the prior two years is significantly higher. However, as noted in last year's report, CalGEM has made at least initial data requests on most of the 805 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 aquifer exemption process.

Currently, there are fifteen aquifer exemption applications undergoing CalGEM and/or State Water Board reviews (see subsection 2.1 Pending Aquifer Exemptions). Nine of the fifteen are applicable to the March 9, 2015, US EPA letter.

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 aquifer exemption packages to US EPA by no later than September 30, 2022.

In a response dated October 15, 2021, the DOC and the State Water Board emphasized that six of the nine aquifer exemption application reviews that remain



to be completed and submitted require additional well integrity evaluations (conduit analysis) to identify and remediate potential fluid conduits within a proposed aquifer exemption area that is overlain by beneficial use groundwater aquifers. The letter indicated that the following actions will be taken before September 30, 2022:

- Complete and submit the three aquifer exemption packages that do not require conduit analysis to the US EPA.
- For the six aquifer exemption packages requiring conduit analysis, complete a review and identify problem wells located within active injection areas.
- Require operator-specific work plans for approval by the State at the completion of each conduit analysis addressing identified problem wells on an ambitious timeline, otherwise affected operations will be shut-in.

An updated schedule for completing the nine remaining packages was submitted to US EPA in December 2021. At that time, it was determined that the Lynch Canyon—Lanigan Sands and Sespe aquifer exemption packages had both already been submitted to the US EPA and a conduit analysis would not be conducted, and the Lompoc aquifer exemption proposal does not have overlying beneficial use aquifers and, as such, does not require conduit analysis.

Based on early conduit analysis data collection, CalGEM has also determined a conduit analysis is not necessary for the Holser aquifer exemption proposal since there are no idle or abandoned wells located in the proposed aquifer exemption area overlain by beneficial use aquifers. In February of 2022, consistent with the process described in Public Resources Code section 3131, subdivision (b), a public comment period was held regarding the Holser aquifer exemption package, including a public hearing on March 29, 2022. A similar public comment process was initiated in connection with the Lompoc aquifer exemption package in March of 2022, including a public hearing scheduled for April 12, 2022.

CalGEM is currently developing responses to the comments received. CalGEM continues to perform the conduit analysis on the five remaining aquifer exemption proposals to identify problem wells. During the course of this work, CalGEM identified and then confirmed through regulatory action that injection activities are no longer occurring nor approved to occur within the presumptive USDW areas that are the subject of the Oxnard aquifer exemption proposal. Consequently, the Oxnard aquifer exemption proposal is no longer among the aquifer exemption proposals necessary to redress the pre-existing Safe Drinking Water Act compliance issues described in the US EPA's March 9, 2015, letter to the State and in subsequent related correspondence. CalGEM is moving forward with the conduit analysis of the remaining four exemption proposals.



5.4.2 Regulatory Updates

No relevant regulatory changes during the reporting period.

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 underground sources of drinking water and other natural resources. See Section 5.3 for details of enforcement actions.

During the reporting period, the Central Valley Regional Water Quality Control Board issued a 13267 order to California Resources Corporation in the Elk Hills Oil Field requiring that they investigate potential impacts to beneficial use aquifers due to their injection activities. The Central Coast Regional Water Quality Control Board worked with CalGEM and oilfield operators to investigate 17 UIC wells that failed MIT between April 1, 2021, and March 31, 2022. The wells were located in the San Ardo, Zaca, 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 is working to put a new 2-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.

- 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 the recommendation in accordance with SB 83 aimed to improve the UIC regulatory Program.



APPENDIX A – REFERENCES & DATA SOURCES

CalGEM

- Department of Finance (DOF) Underground Injection Control Audit Report: <https://esd.dof.ca.gov/reports/reportPdf/5631D3F7-882E-EB11-9121-00505685B5D1/California%20Department%20of%20Conservation%20Underground%20Injection%20Control%20and%20Well%20Stimulation%20Treatment%20Programs%20Performance%20Audit%20November%202020>
- CalGEM Statutes and Regulations (January 2022): <https://www.conservation.ca.gov/index/Documents/CALGEM-SR-1%20Web%20Copy.pdf>
- CalGEM's Aquifer Exemption Status Report is an internal Excel workbook used by staff to monitor the progress of the aquifer exemption application process. The file is shared with the Water Boards and the US EPA.
- US EPA 7520 Mid-Year Reports (EPA Forms 7520-2A and 7520-2B) from the UIC Federal Reporting System, which solicits information under the authority of the Safe Drinking Water Act. CalGEM submits the reports to the US EPA twice in a federal fiscal year – an initial report covering activities from Oct 1 to March 31 (mid-year) then a second one covering Oct 1 to September 30 (full-year).
- US EPA Letter to CALGEM (referred to by previous name, DOGGR, in the letter) and the State Water Board dated March 9, 2015, referenced in Public Resources Code section 3114, subdivision (a)(16): <https://www.epa.gov/sites/production/files/2015-07/documents/cswrcb-uic-dswa-compliance-ltr-2015-03-09.pdf>
- 2018 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: 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
- Groundwater Protection Council release of UIC Program Peer Review https://www.gwpc.org/uploads/documents/publications/Final_California_Class_II_Peer_Review_4_6_2020.pdf



KERN COUNTY

- 2021 Kern County Oil and Gas Permitting Program Annual Progress Report:
https://psbweb.co.kern.ca.us/planning/pdfs/oil_gas/kern_oil_gas_annual_progress_report_2021.pdf

WATER BOARDS

- Bi-weekly UIC Project Review Status Reports:
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.)



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