

State Primacy Update
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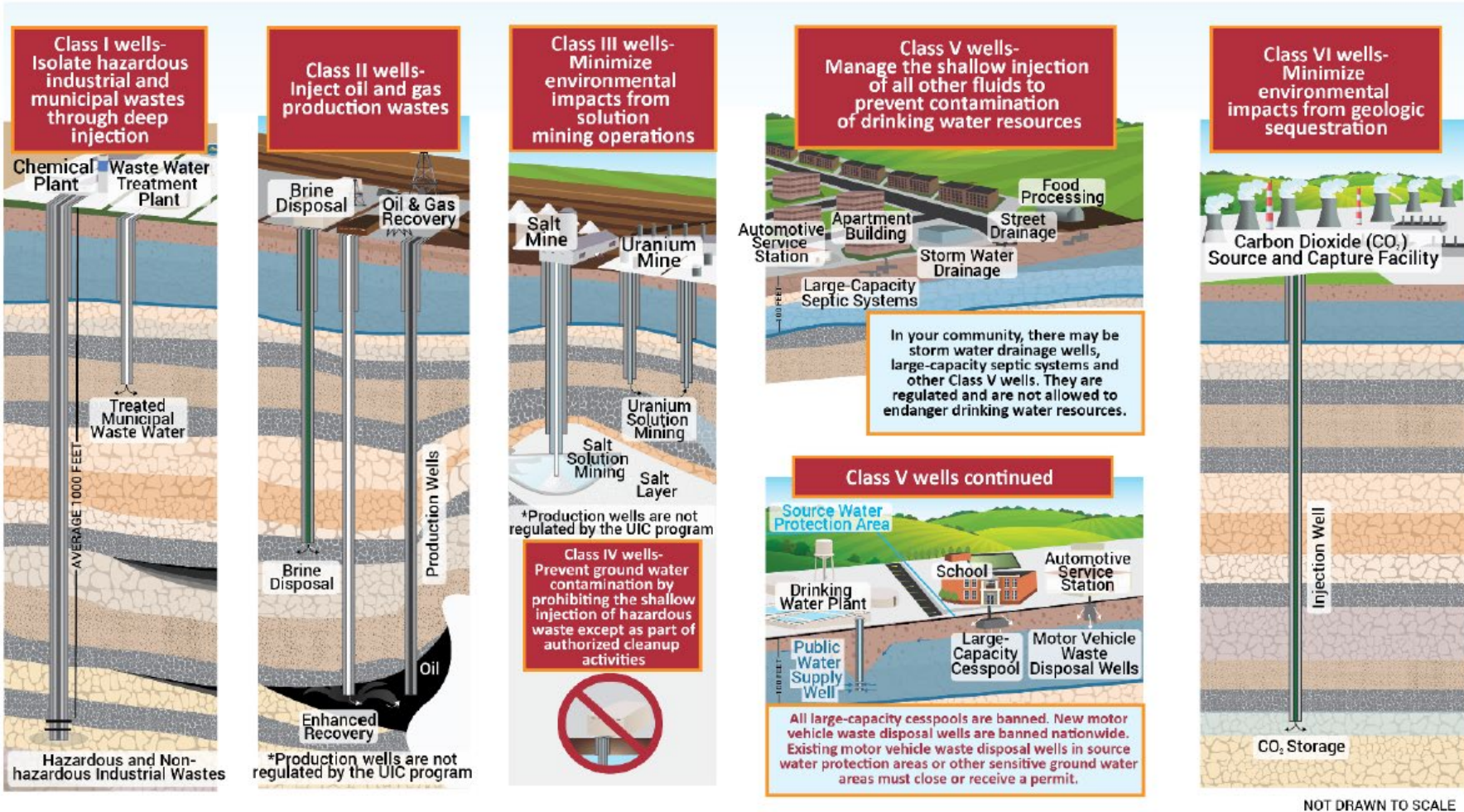
CCS Permitting Summary

	UIC Class VI	U.S. EPA Subpart RR MRV Plan	CARB LCFS Permanence Certification (optional)
Description	Permit to construct and operate CO ₂ injection well	GHGRP required monitoring and accounting plan; supports 45Q participation	Certification framework for CARB LCFS credit participation
Permitting Agency	U.S. EPA or Class VI Primacy State	U.S. EPA Office of Air and Radiation, GHGRP	CARB, Greenhouse Gas Measures Section
Key Components	Geologic site characterization; modeling CO ₂ plume/elevated pressure extent; injection well construction design and operation plan; abandoned well corrective action plan; monitoring plans	CO ₂ metering and monitoring plan; CO ₂ mass storage calculation method; leakage pathways evaluation	Mirrors EPA Class VI requirements with additional monitoring requirements, 1-year baseline monitoring, risk analysis, 3 rd party review
Critical Milestones	(1) Completeness review; (2) Technical review; (3) Draft permit; (4) Public comment; (5) Final permit decision	(1) Technical review; (2) MRV plan approval; (3) Decision	(1) High level screening; (2) Detailed screening; (3) Technical review; (4) Sequestration site certification; (5) CCS Project certification
<u>Approximate</u> Permitting Timeline	2.5 years (EPA)	6 – 12 months	2 years (assuming concurrent with 1-yr baseline monitoring)

EPA = Environmental Protection Agency UIC = Underground Injection Control
MRV = Monitoring, Reporting and Verification

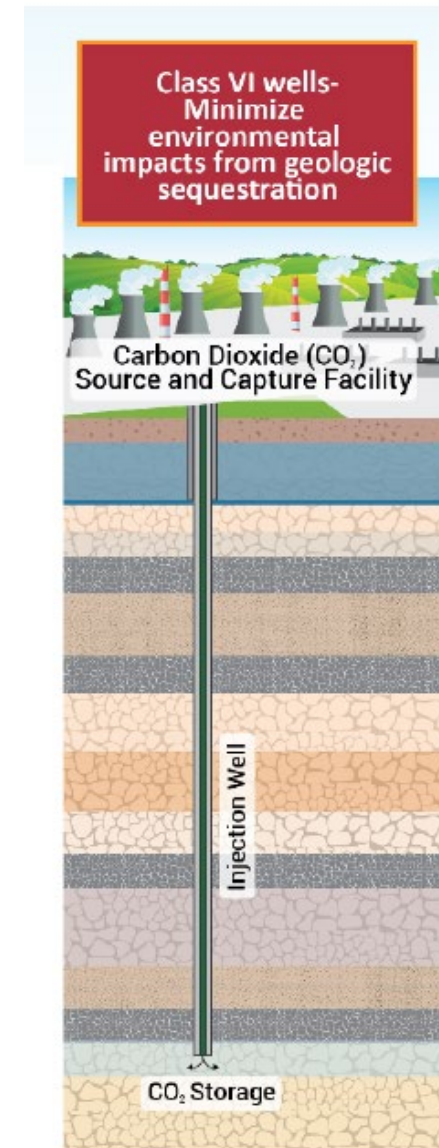
CARB = California Air Resources Board LCFS = Low Carbon Fuel Standard
GHGRP = Greenhouse Gas Reporting Program

Underground Injection Control (UIC) Program



UIC Primacy Overview

- **Primary enforcement responsibility** or “**Primacy**”, refers to state, territory, or tribal responsibilities associated with implementing EPA approved UIC programs. A state, territory, or tribe with UIC primacy, or primary enforcement authority oversees the UIC program in that state, territory, or tribe.
- States or tribal nations seeking UIC program primacy must demonstrate to EPA that the state has:
 - Jurisdiction over underground injection
 - Regulations that meet the federal requirements for 1422 programs (or are effective under Section 1425); and
 - The necessary administrative, civil and criminal enforcement penalty remedies.
- **If a state, territory, or tribe does not obtain primacy for all or some UIC well classes, EPA implements the program directly through one of its regional offices.**



NOT DRAWN TO SCALE

Primacy Overview (cont'd)

- **The Western US is the most active region in the country for seeking Class VI UIC Primacy**
- State primacy over Class VI programs aims to relieve the permitting bottleneck at the EPA and progress Class VI projects faster
- **One primary benefit of obtaining primacy is a reduction in the time required to obtain a Class VI well permit in the state.**
- Recent Primacy Application activity indicates the timelines for states to receive approval has reduced by half:
 - North Dakota (2018) = 5 years
 - Wyoming = 2 years
 - Louisiana = 2.3 years
- Bipartisan Infrastructure Law established a \$50 million program to assist states interested in Class VI primacy, with 100% of Federal funding provided as grants with no state

Class VI Well Approval Timeline Comparison

EPA Class VI Approval Timelines





- 24-72 months
- 2 years is best case scenario

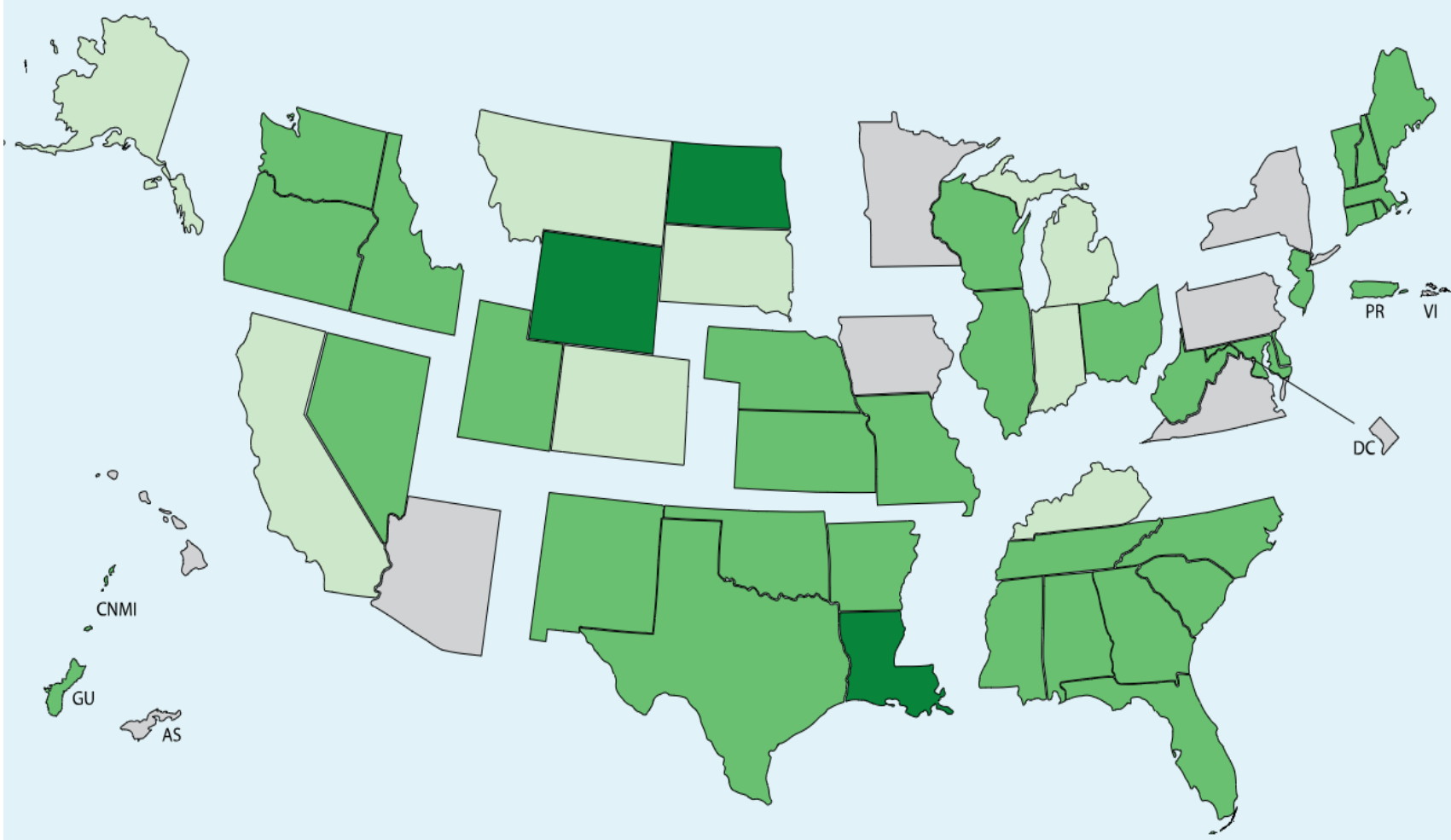
Primacy State Class VI Approval Timelines

- North Dakota: 5-16 months
- Wyoming: 10-17 months

State Primacy Status - All Well Classes

“EPA believes that allowing independent primacy for Class VI wells may encourage states to obtain primacy and to also develop a more comprehensive approach to managing GS projects and the integration of carbon capture and storage (CCS) issues that may be outside the scope of SDWA.”

	EPA manages all well classes.
	State has primacy for Class II wells only.
	State has primacy for multiple well classes.
	State has primacy for all well classes (Classes I, II, III, IV, V and VI).



<https://www.epa.gov/uic/primary-enforcement-authority-underground-injection-control-program-0>

UIC Primacy and Program Revision Applications

	Pre-Application Activities	Completeness Determination	Application Evaluation	Rulemaking and Codification	Applications Approved (within the last year)
Primacy Applications	AK-Class VI*	AZ-Classes I-VI*			
Program Revision Applications	OK - Class VI* MS - Classes III and V WV - Classes I-V PR - Classes I-V TX - Class VI* UT - Class VI*	WV-Class VI*			LA-Class VI

Primacy Application = new application for a UIC Program (e.g. Class I-V or Class VI)

Program Revision Application = revision made to an already existing state UIC program

* State seeking initial primary enforcement responsibility for Class VI

<https://epa.gov/uic/primary-enforcement-authority-underground-injection-control-program>

CUSP West States - Class VI Primacy Status

Pre-Application Activities

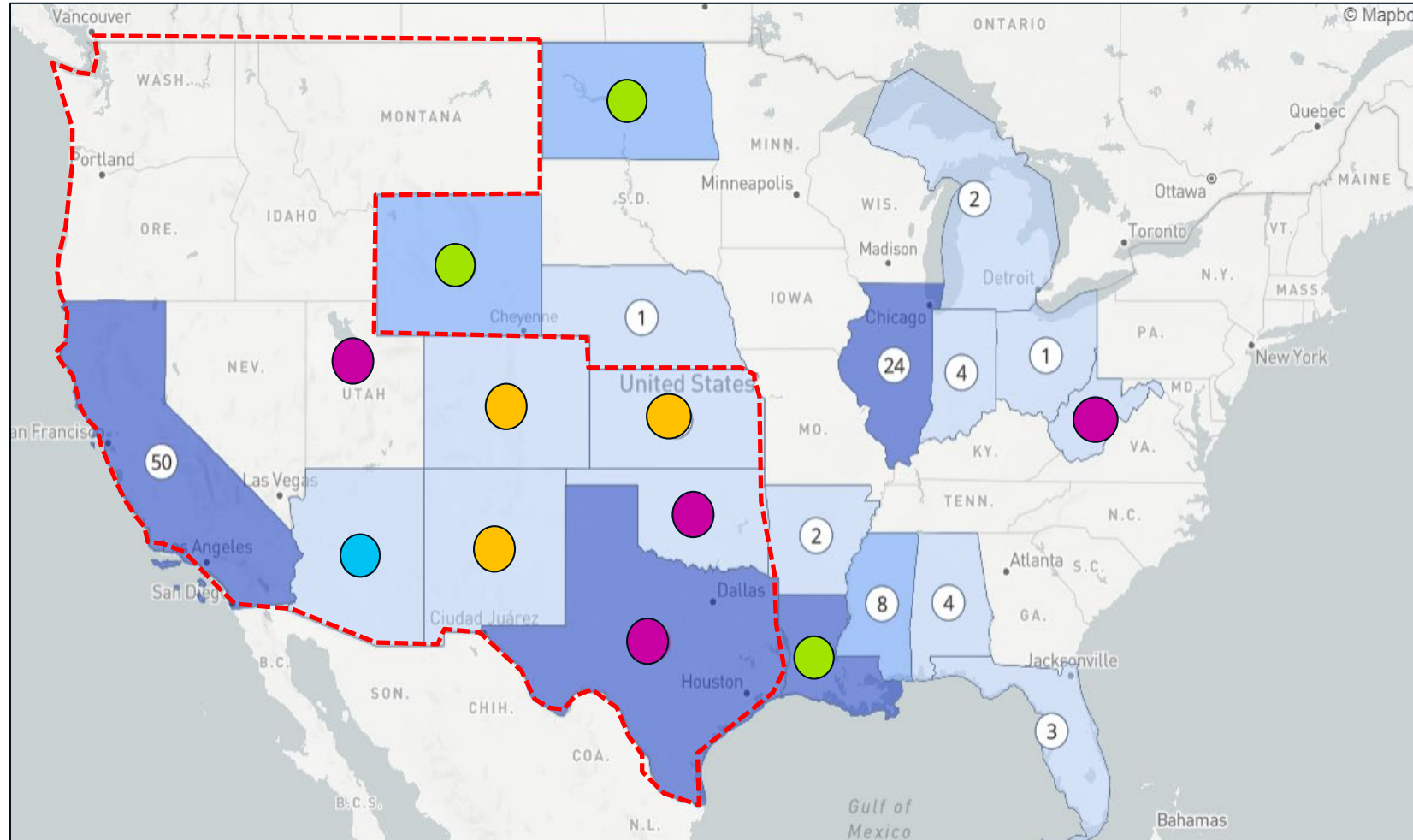
- Texas
- Utah
- Oklahoma

Completeness Determination

- Arizona

Western States Expected to begin the formal Class VI Primacy Process in the near term:

- Colorado
- New Mexico
- Kansas



Map Key

- preparing to begin application process
- pre-application activities
- completeness determination
- has primacy

# of Well Applications	?
	0-5 applications
	6-19 applications
	20+ applications

<https://www.catf.us/2023/11/interactive-map-class-vi-wells-geologic-storage-carbon-dioxide/>

Class VI Primacy: General Requirements

- The legal authority to implement all required permit requirements
- The necessary procedures for the state's compliance evaluation program;
- The necessary administrative, civil and criminal enforcement penalty remedies
- Regulations that are at least as stringent as those promulgated by EPA (e.g., permitting, inspection, operation, monitoring and recordkeeping requirements; inspection and compliance monitoring requirements; and
- Statewide jurisdiction over underground injection projects.

- Recent findings indicate a strong environmental justice component is required for the Class VI Primacy application



Geologic Sequestration of Carbon Dioxide

Underground Injection Control (UIC) Program Class VI Primacy Manual for State Directors

Environmental Justice and Class VI Primacy

- In December 2022 EPA Administrator Michael Regan authored a letter to state governors regarding EJ in Class VI primacy applications, laying out EJ approaches that the EPA will be looking for in Class VI primacy applications.
- The Letter to Governors advised, “it is important for environmental justice and equity considerations to be fully integrated into the UIC Class VI program, including in permitting.”
- Louisiana’s Program Description and Memorandum of Agreement were revised to incorporate principles listed in the Letter to Governors prior to receiving Primacy

https://www.epa.gov/system/files/documents/2022-12/AD.Regan_.GOVS_.Sig_.Class%20VI.12-9-22.pdf

- **Implement an Inclusive Public Participation Process.** States seeking Class VI primacy should fully incorporate robust and ongoing opportunities for public participation, especially for lower-income people and communities of color. States should provide early notice of proposed Class VI wells and tailor public participation to specific community needs and interests, including scheduling public meetings at times convenient for residents with appropriate translation services where needed, enabling face-to-face or written feedback on permit applications early in the review process, or supporting the development of community benefits agreements.
- **Consider Environmental Justice Impacts on Communities.** States should include environmental justice as a core element in implementing their Class VI programs. For example, in their review of permit applications, states should evaluate whether the siting of a Class VI project at the proposed location will create any new risks or exacerbate any existing impacts on lower-income people and communities of color. Such evaluations might consider the presence of existing environmental hazards, potential exposure pathways, and susceptible sub-populations, as well as the likely distribution of any environmental and public health benefits from the proposed Class VI project in affected communities. EPA’s EJScreen is a useful tool states can employ to identify environmental and social stressors in specific communities.
- **Enforce Class VI Regulatory Protections.** The Safe Drinking Water Act Class VI regulations include strong protections for communities to prevent contamination of underground drinking water sources. These regulatory protections include a variety of measures, including proper site characterization and strict construction, operating, and monitoring requirements to ensure well and formation integrity, proper plugging of wells, and long-term project management and post-injection site care to ensure leakage prevention. States should properly implement and enforce these requirements to protect communities from potential harms associated with injection wells.
- **Incorporate Other Mitigation Measures.** States with Class VI primacy should proactively work to prevent and/or reduce any adverse impacts to underground sources of drinking water from well construction and operational activities. While the UIC program is designed to protect underground sources of drinking water, there are a range of mitigation measures that states could incorporate to ensure Class VI projects do not increase environmental impacts and public health risks in already overburdened communities. Measures designed to protect residential areas could include carbon dioxide monitoring and release notification networks, and installation of enhanced pollution controls. Additionally, states could encourage the adoption of other measures to offset impacts by improving other environmental amenities for the communities identified within the delineated area and providing resources for clean-up of previously degraded public areas. All communities should benefit equally from these mitigation and prevention efforts.

Texas: Next in Line for Class VI Primacy

- December 19, 2022: The RRC Submitted Class VI Primacy application
- August 2023: Final rule amendments submitted to the EPA
- September 11, 2023: Additional changes made to the RRC’s regulations enacted to further align the RRC program with the EPA’s Class VI regulations
- Texas’ Primacy Application is expected to be approved in less time than Louisiana’s (could be as early as 12/24), however, more focus on EJ may be required by the EPA.

Texas: EPA Class VI Permit Statistics

Projects Currently Under Review	Well Applications Currently Under Review	Final Permit Decisions Issued	% of Applications Received in Last 12 Months	Applications for which EPA is Waiting for Applicant Response	Applications Currently On Applicant Requested Hold
16	43	0	65%	0	1

<https://www.epa.gov/uic/current-class-vi-projects-under-review-epa>

Colorado

- In 2023, the Colorado General Assembly enacted legislation (HB24-1346) granting the Colorado Energy and Carbon Management Commission (CECMC) authority over wells injecting and permanently sequestering carbon dioxide. Widely seen as a pre-requisite and preparational step to being granted Class VI Primacy
 - Key Elements of HB24-1346
 - 1) Authority over DAC facilities, 2) Expanded Authority over Class VI wells, 3) Definition and Ownership of Pore Space, 4) Unitization framework for geologic storage, 5) Technical Assistance to Local Governments
- CECMC (Colorado Energy and Carbon Management Commission) issues a preliminary set of draft rules for public comment July 26, 2024
- The CECMC's hearing on its proposed Class VI permitting rulemaking is scheduled for October 21, 2024.

Colorado Makes Policy Moves With an Eye Toward Regulating Carbon Sequestration

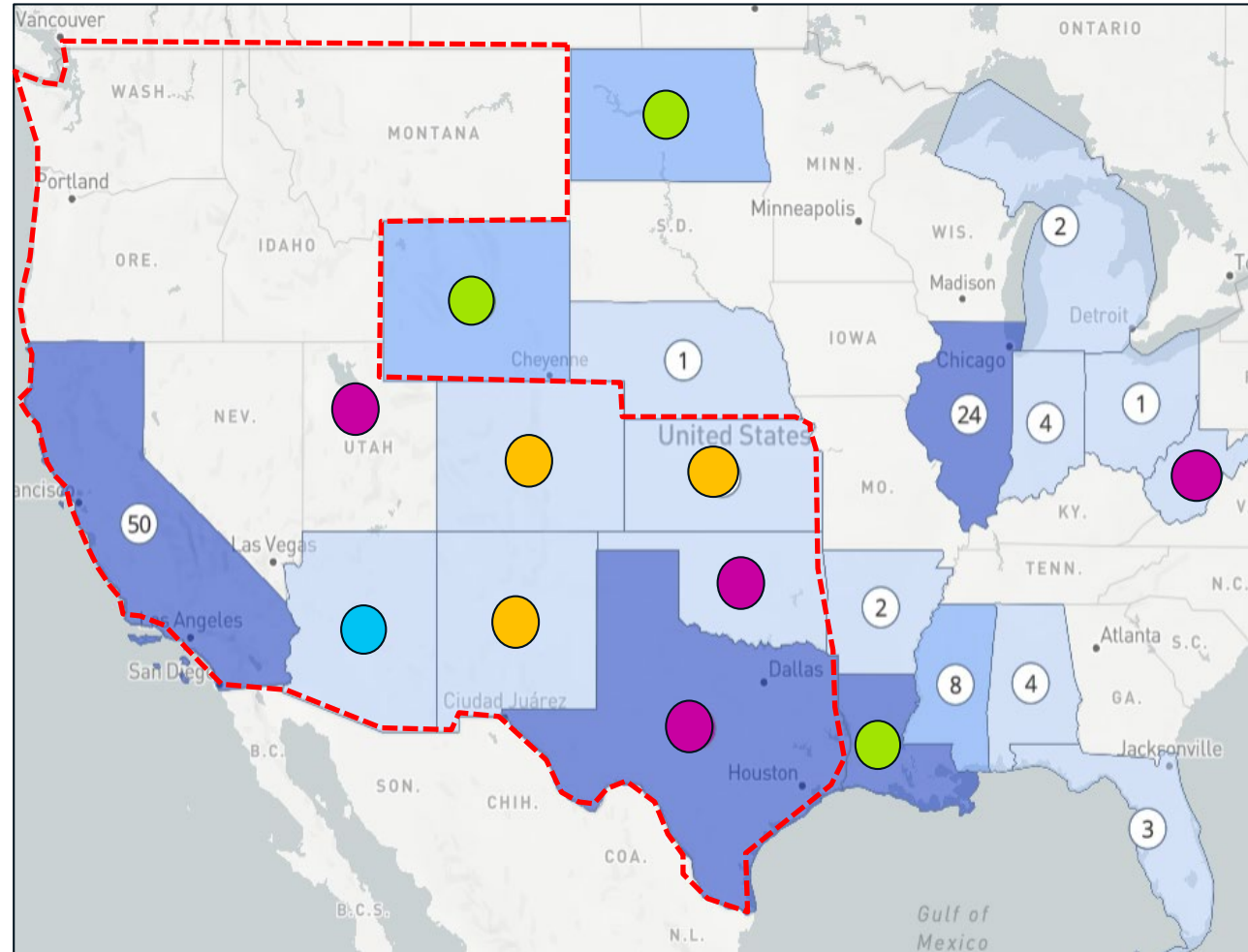
BROWNSTEIN CLIENT ALERT, MAY 23, 2023

Proposed Rules for Class VI UIC Permits through the Colorado Energy and Carbon Management Commission

Experience From Louisiana: *Deep South Center For Environmental Justice; Healthy Gulf; Alliance For Affordable Energy, v. United States Environmental Protection Agency*

- Opening brief of petitioners outlines two issues:
 - Liability release upon site closure (by statute, after releasing original owner and operator liabilities, there is no subsequent owner to whom liability for Louisiana Class VI well failures flows)
 - LDENR expertise (LDENR stated that it did not have expertise in-house for all areas necessary to evaluate all technical aspects of permit applications but would rely on third party contractors)

Map Key



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Light Blue	0-5 applications
Medium Blue	6-19 applications
Dark Blue	20+ applications

