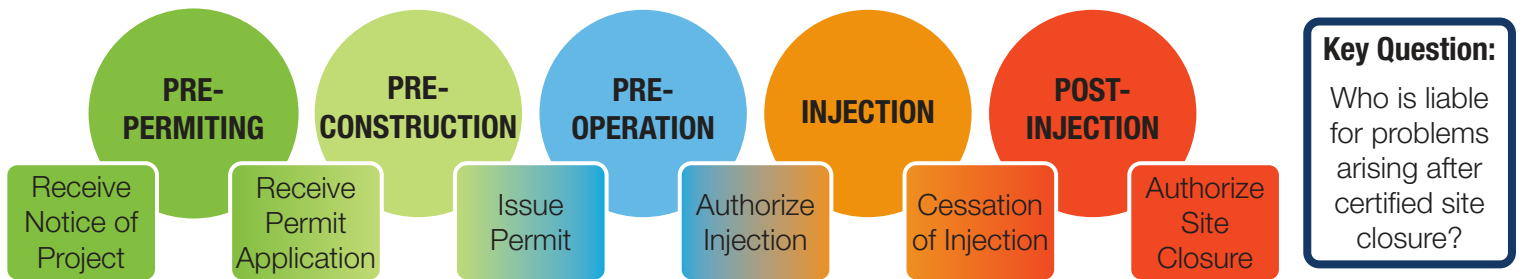


## ISSUE BRIEF:

# Approaches to Long-Term Liability of Class VI Injection Wells

As more carbon capture and storage (CCS) projects are proposed and as states consider related legislation, it is important to understand the long-term liability considerations associated with geologic carbon storage – increasingly attractive as a permanent storage tool. CCS projects from initial operations through monitoring post-closure can run many decades, raising questions about responsibility and liability for issues that may arise far into the future. Approaches that broadly release operators of future liability can create operational, public-perception, and other risks. The [Great Plains Institute](#) and [Environmental Defense Fund](#) here suggest an alternative post-closure liability framework designed to minimize these risks while providing for long-term regulatory certainty.

This issue brief outlines operator responsibility during the lifecycle of a typical CCS project, articulates concerns with overly broad post-closure liability release, describes EPA's approach to this issue under its [Class VI Underground Injection Control program](#), and proposes a framework for tailoring post-closure liability release to the public interest.



Source: <https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-carbon-dioxide>

The EPA regulates carbon dioxide (CO<sub>2</sub>) storage through Class VI of the Underground Injection Control Program. The above graphic from EPA provides a general overview of the lifecycle of a Class VI project. The injection phase can last anywhere from 10 to 20 years. Once the injection project is complete, operators will plug the well and begin what's called "post-injection site care", a period of modeling, testing, and monitoring to ensure secure storage that can last 10 to 50 years or longer. Once this post-injection period is complete to the regulator's satisfaction, operators receive a project closure authorization or certificate. At this point, the Class VI rule provides for the return of financial assurances to the operator and relieves the operator of ongoing routine monitoring and maintenance requirements.

It is at this moment in the timeline that federal and state regulatory approaches begin to differ. Some states have enacted or modified their statutory approaches to post-closure liability, transferring ownership, liability, and responsibility over closed wells to the government in varying ways. Other states have maintained more traditional liability arrangements, explicitly indicating that liability remains with operators in perpetuity.

Under the federal rule, operators implicitly remain liable for problems arising after site closure until statutes of limitation have run, but some states have pursued legislation to exempt operators from any and all post-closure liability and transfer it to the state.

### Such unlimited liability transfers could:

Risk creating a moral hazard where operators are not properly incentivized to conduct operations in a protective manner

Send mixed signals to the public about the safety of CO<sub>2</sub> storage

Threaten the ability of states to receive Class VI primacy from EPA

A collaboration between:



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## Great Plains Institute and Environmental Defense Fund Recommendations:

Properly selected, managed, and closed sites have a very low risk of liability through and beyond the project lifecycle. Liabilities arising from emergency and remedial response actions occurring during the CCS project lifecycle (i.e., injection and post-injection site closure periods) can be managed through insurance. Any remaining risk can be managed using traditional third-party financial assurances (e.g., letters of credit, surety bonds, and/or cash-based instruments), as well as through the application of traditional statutes of limitation – rendering broad liability exemptions unnecessary and subject to the risks discussed above.<sup>1</sup>

For states committed to granting liability exemptions to operators for the post-closure period, an approach that does not relieve civil, criminal, or contractual liability and imposes the following limitations to regulatory liability exemption is most likely to avoid moral hazard, public mistrust, and primacy problems. This includes, at minimum, reverting regulatory liability to the operator in the following situations:

1. The operator violated a duty imposed on the operator by state law or regulation prior to approval of site closure, and any applicable statutes of limitation have not run;
2. The regulatory agency determines, after notice and hearing, that the operator provided deficient or erroneous information that was material and relied upon by the regulatory agency to support the approval of site closure;
3. The regulatory agency determines, after notice and hearing, that there is fluid migration for which the operator is responsible that causes or threatens imminent and substantial endangerment to an underground source of drinking water.
4. The regulatory agency determines neither a carbon dioxide storage trust fund, nor any amounts held in escrow are sufficient to cover costs arising from geologic storage facilities.

## What has the EPA said about post-closure liability transfer?

### In the preamble to the Class VI rule, EPA clarified the following:

- While an owner/operator will generally no longer be subject to regulatory requirements under SDWA 1423 upon approval of site closure, there are circumstances for which the owner/operator may be held liable for regulatory noncompliance even after site closure is approved.
- *“An owner/operator may always be subject to an order the regulator deems necessary to protect the health of persons under section 1431 of the SDWA after site closure if there is fluid migration that causes or threatens imminent and substantial endangerment to a USDW.”*
- *“After site closure, an owner or operator may, depending on the fact scenario, remain liable under tort and other remedies, or under other Statutes including, but not limited to, Clean Air Act, 42 U.S.C. §§7401–7671; CERCLA, 42 U.S.C. §9601–9675; and RCRA, 42 U.S.C. 6901–6992.”*

### In response to public comments submitted re: Louisiana’s Class VI primacy application, the EPA stated:

- *“[S]tate liability transfer provisions must be appropriately crafted so that the State’s Class VI program meets UIC regulatory requirements. Certain provisions could result in stringency issues.”* Referencing the 2010 Class VI Rule preamble, EPA continued in its responses to Louisiana primacy comments:
- *“. . .[E]ven after the former permittee has fulfilled all of its UIC regulatory obligations, it may still be held liable for previous regulatory noncompliance. Thus, there may be stringency issues if a state law authorizes the permitting agency to release a former permittee from liability for earlier UIC violations. . . [A] former permittee may always be subject to an order the Administrator deems necessary to protect public health if there is fluid migration that causes or threatens imminent and substantial endangerment to a USDW. The EPA’s UIC regulations require that state UIC programs possess similar emergency authority (40 CFR 144.12(e)).”*

<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2023), [https://report.ipcc.ch/ar6syr/pdf/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_LongerReport.pdf); Global CCS Institute (GCCSI), Lessons and Perceptions: Adopting a Commercial Approach to CCS Liability (2019), [https://www.globalccsinstitute.com/wp-content/uploads/2020/04/Thought-Leadership-Liability-Study\\_FINAL\\_Digital.pdf](https://www.globalccsinstitute.com/wp-content/uploads/2020/04/Thought-Leadership-Liability-Study_FINAL_Digital.pdf). IPCC, as early as its 2005 Special Report on CCS, concluded that well-selected, designed, and managed geological storage sites will likely exceed 99 percent retention of sequestered gases over 1,000 years. In its recent 2022 report, IPCC built on additional research and went a step further to simply state with “high confidence” that “[i]f the geological storage site is appropriately selected and managed, it is estimated that the CO<sub>2</sub> can be permanently isolated from the atmosphere.”