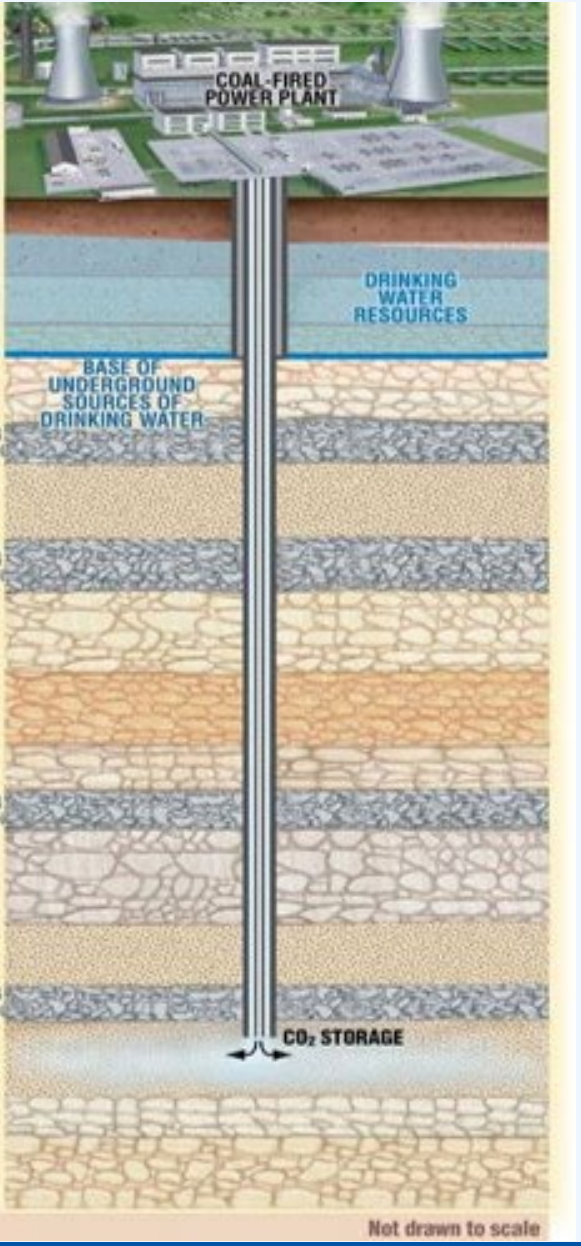
EPA Class VI Program

August 2024

United States Environmental Protection Agency

Office of Water



SDWA and the UIC Program

The Safe Drinking Water Act (SDWA):

- protects public health by regulating the nation's public drinking water supply.
- protects both surface and underground sources of drinking water.

The Underground Injection Control (UIC) program:

- is regulated under SDWA.
- protects underground sources of drinking water (USDWs) from contamination caused by injection of fluids into the subsurface for disposal or storage.
  - USDWs are aquifers or parts of aquifers that currently are, or in the future could be, a drinking water source.
  - fluids include water, wastewater, brines produced during oil and gas production, or carbon dioxide (CO_2).

UIC Program Activities and Well Classes

UIC Injection Well Regulations Cover:

- Technical aspects (from site evaluation through operations to closure).
- Permitting and site inspections.
- Reporting requirements and compliance.

Six UIC Well Classes for Different Types of Fluids

Class I: Hazardous and nonhazardous wastes

Class II: Fluids from oil and gas production

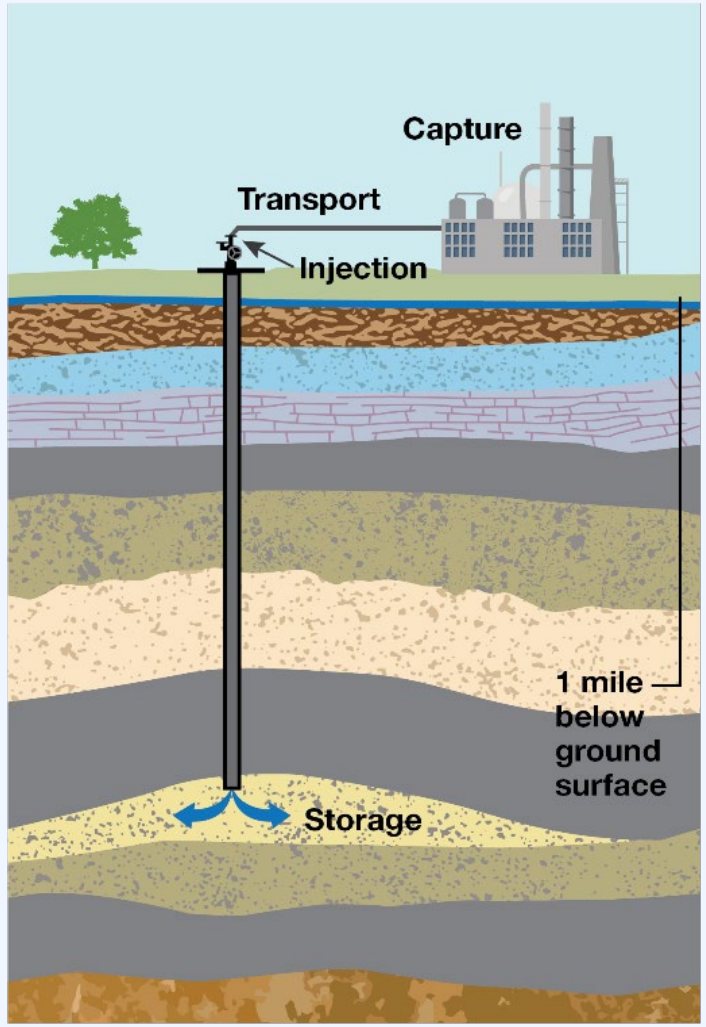
Class III: Fluids to dissolve and extract minerals

Class IV: Shallow hazardous and radioactive (banned)

Class V: Nonhazardous wastes into or above USDWs (e.g., stormwater)

Class VI: Geologic sequestration (GS) of carbon dioxide (CO_2)

Geologic Sequestration and UIC Class VI Regulations



What is Geologic Sequestration of CO_2?

- GS is the practice of injecting and storing CO_2 underground into deep rock formations. This is part of the process often referred to as carbon capture and sequestration (CCS).
- Goal is to reduce CO_2 emissions to combat climate change.

UIC Regulations Cover a GS Project from Start to Finish

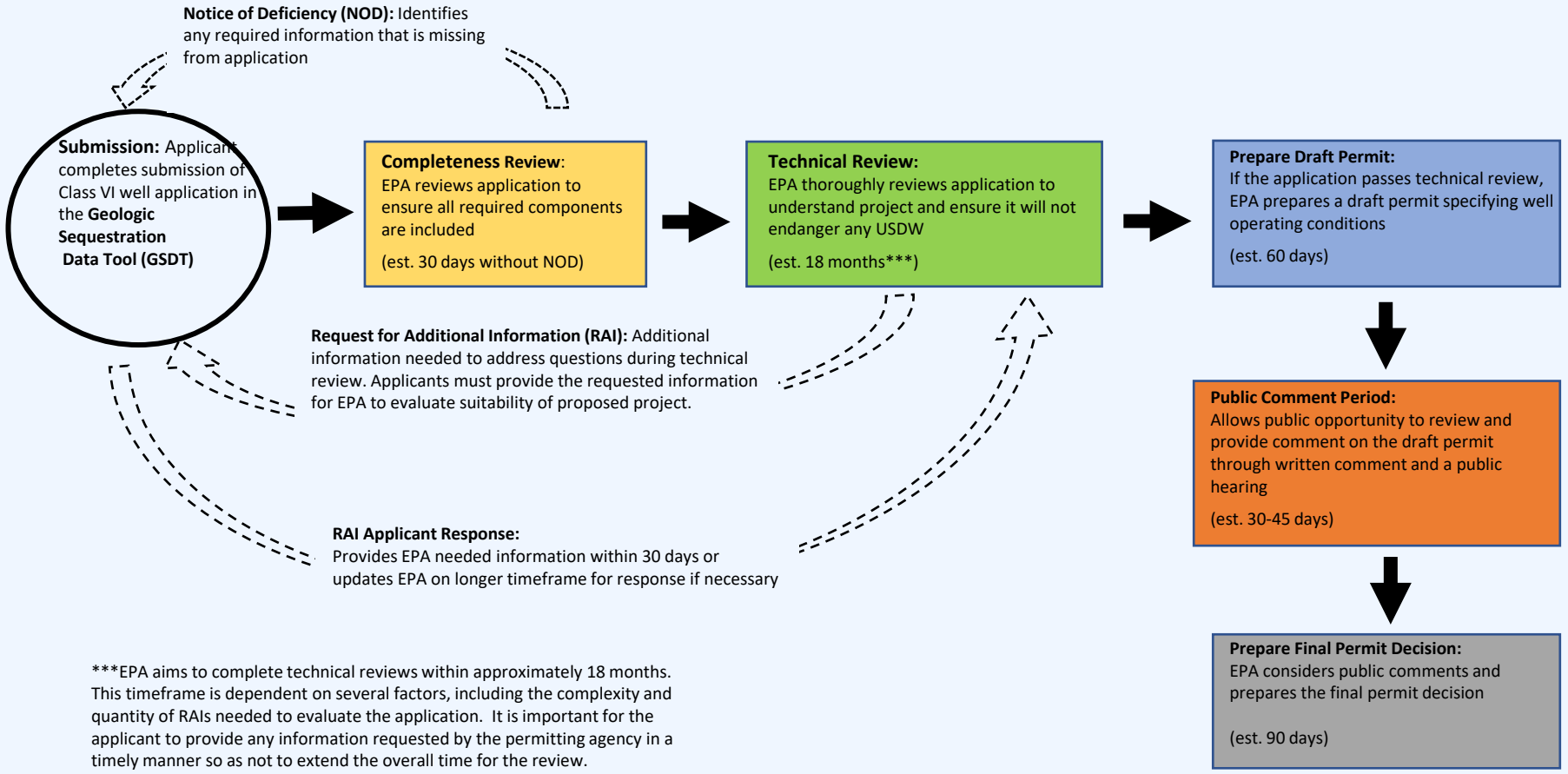
- Siting (selection of location)
- Permitting
- Well Construction
- Operations
- Well and Site Closure

UIC regulations are designed to protect USDWs by preventing movement of CO_2 out of the injection formation.

Protective aspects of UIC Class VI regulations include:

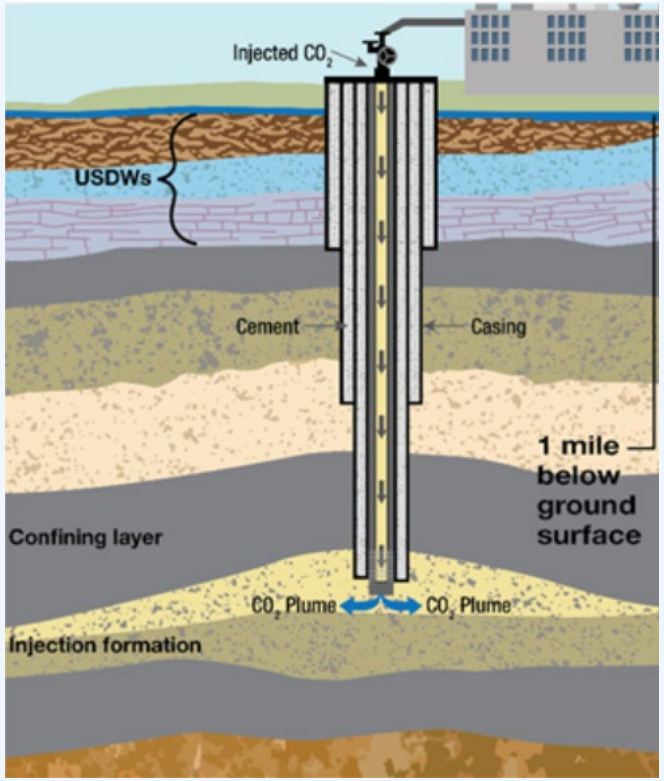
- Multiple safeguards to protect USDWs (described later in this presentation).
- Development of written plans for operating a GS project based on EPA technical guidance.
- Adaptable and evolving - revisions made to plans if new data indicate the need.
- Tracking the movement of the "plume" of CO_2 and any other potential changes in the subsurface.

Class VI Permitting Process



***EPA aims to complete technical reviews within approximately 18 months. This timeframe is dependent on several factors, including the complexity and quantity of RAIs needed to evaluate the application. It is important for the applicant to provide any information requested by the permitting agency in a timely manner so as not to extend the overall time for the review.

Class VI Permitting Activity



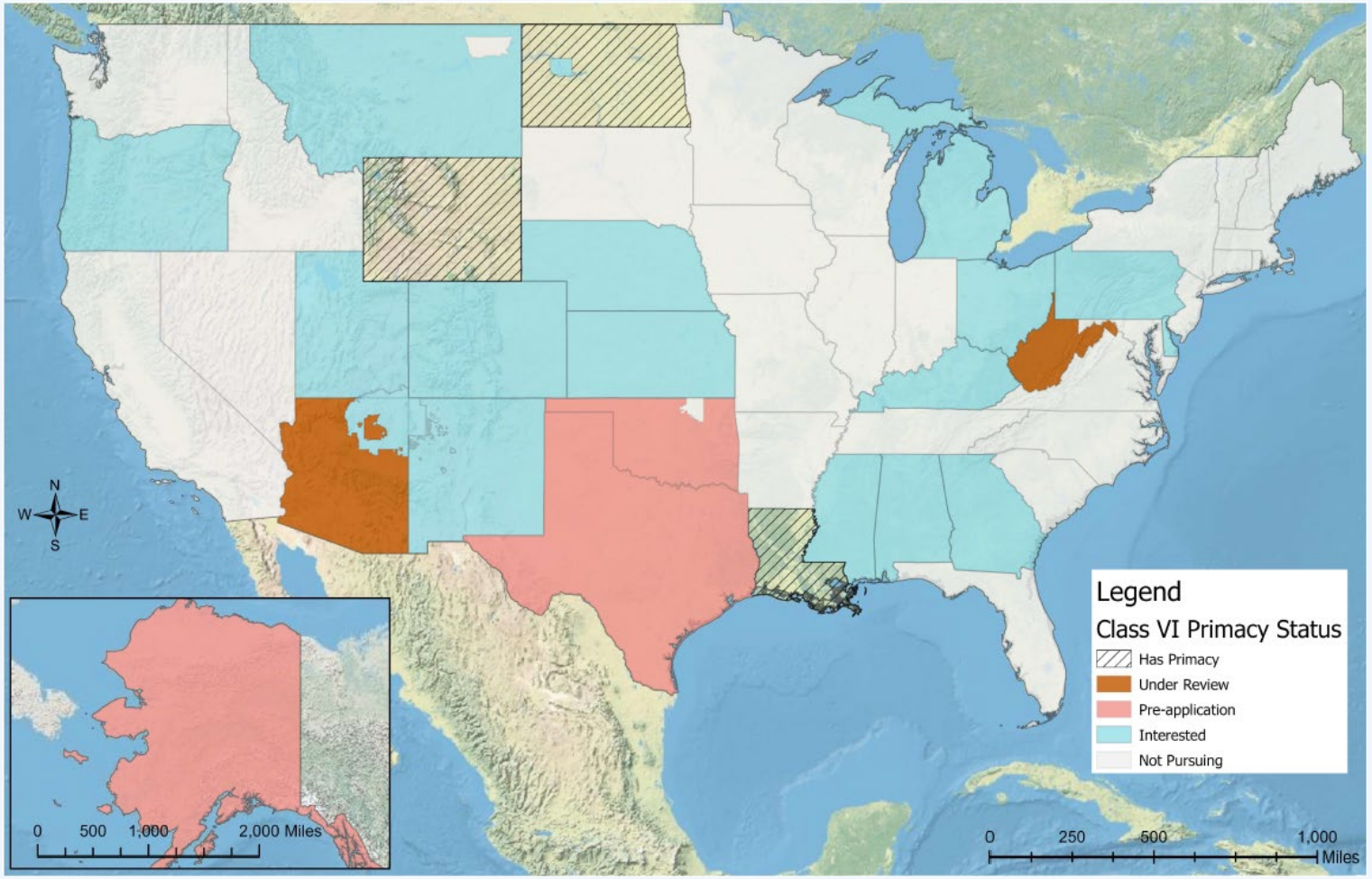
EPA continues to see an increase in Class VI permitting activity. As of 7/19/24 EPA is reviewing 141 applications across 48 projects.

- 2 permits issued in IN for Wabash Carbon Services – 1/6/24
- 4 draft permits in CA for Carbon TerraVault Elk Hills 26R are undergoing a second public notice following changes to the proposed CO_2 sources – comments due 8/12/2024

EPA aims to review complete Class VI applications and issue permits, when appropriate, within approximately two years.

UIC Class VI Primacy

- North Dakota, Wyoming, and Louisiana have Class VI primacy
- Applications for Arizona and West Virginia are under review



Class VI Primacy Grant

The EPA has announced $48,250,000 in Bipartisan Infrastructure Law funding for States and Tribes to develop and implement Class VI Programs.

- Grant program announced November 2, 2023.
- 25 states and Tribes submitted Letters of Intent to the EPA to participate in the grant program (AK, AL, AZ, CO, DE, GA, KS, KY, LA, MHA Nation, MI, MS, MT, Navajo Nation, ND, NE, NM, OH, OK, OR, PA, TX, UT, WV, WY).
- The funds have been allocated evenly among these states and Tribes, with each receiving an allotment of $1,930,000.
- This is a one-time release of funding, with no match requirements. States and Tribes are encouraged to apply with work plans of up to five years.
- EPA is requiring states and Tribes to integrate environmental justice planning and controls, such as those described in an August 17, 2023 document titled *Environmental Justice Guidance for UIC Class VI Permitting and Primacy*, into their processes as a threshold requirement to receive funding under this grant program.
- More information can be found in the Class VI Grant Implementation Document and Class VI Grant Fact Sheet.

Currently Available Class VI Resources

- **Final Class VI Guidance Documents:** https://www.epa.gov/uic/final-class-vi-guidance-documents
- **Data Repository:** Contains Class VI permitting materials, such as permit applications, final draft permits, final permits, final Environmental Justice documents, testing and monitoring reports, and permit violation notifications. https://udr.epa.gov/ords/uicdr/r/uicdr_ext/uicdr-pub/map
- **Permit Application Outline:** An overview of items and associated activities an applicant may complete during the Class VI permit application process. https://www.epa.gov/uic/class-vi-permit-application-outline
- **Permit application templates.** These templates streamline the development and evaluation of applications and submission of reports. https://www.epa.gov/uic/class-vi-permit-application-templates
- **Completeness Review Checklist:** A list of information that must be submitted with a Class VI permit application for that application to be deemed administratively complete by the permitting authority. https://www.epa.gov/uic/class-vi-geologic-sequestration-permit-application-and-permitting-tools##completeness_checklist
- **GS Rules and Tools Crosswalk:** This report, published by DOE's National Energy Technology Lab (NETL) with contributions from EPA, summarizes computational tools and methods that may be used to address specific requirements of the Class VI permit application process. https://www.epa.gov/uic/class-vi-geologic-sequestration-permit-application-and-permitting-tools#RulesAndTools
- **GSDT video tutorials:** EPA has released five GSDT video tutorials to provide an overview of GSDT capabilities as well as technical instructions. https://www.epa.gov/uic/geologic-sequestration-data-tool-gsdt-video-tutorials
- **CCS Regulations Table**: Regulatory and statutory authorities relevant to carbon capture and storage (CCS) projects. https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-carbon-dioxide#authorities
- **Class VI Risk Mitigation Brochure:** Offers information on how UIC Class VI regulations protect USDWs throughout project planning, construction, injection, and site closure. https://www.epa.gov/system/files/documents/2023-04/EPA%20Pamphlet_How%20Class%20VI%20Regulations%20Ensure%20Groundwater%20Protection.pdf

This week: Class VI Permit Application Training Workshop

Details:

EPA is holding a training workshop for Class VI permit applicants. The purpose of the workshop is to provide information to prospective Class VI permit applicants on how to develop a permit application that contains all the required information, demonstrates that a proposed site meets the Class VI requirements, and facilitates the review. The workshop will also demonstrate how the various tools that EPA has developed can be used by Class VI applicants.

First half: Thursday, August 8 from 1:30 to 4:30 pm

Second half: Friday, August 9 from 9:00 am to 12:00 pm

To register:

https://www.epa.gov/uic/forms/class-vi-permit-application-training-workshop-registration-page

Additional Information

For more information on the UIC program, please visit:

EPA UIC Website: https://www.epa.gov/uic

EPA UIC Class VI Website: https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-carbon-dioxide

EPA UIC Fact Sheet: https://www.epa.gov/sites/default/files/2020-04/documents/uic_fact_sheet.pdf

Who to contact with questions:

For general UIC questions, email: safewater@epa.gov

For Class VI questions, email: UIC-ClassVI@epa.gov

For GSDT Questions, email: GSDataTool@epa.gov