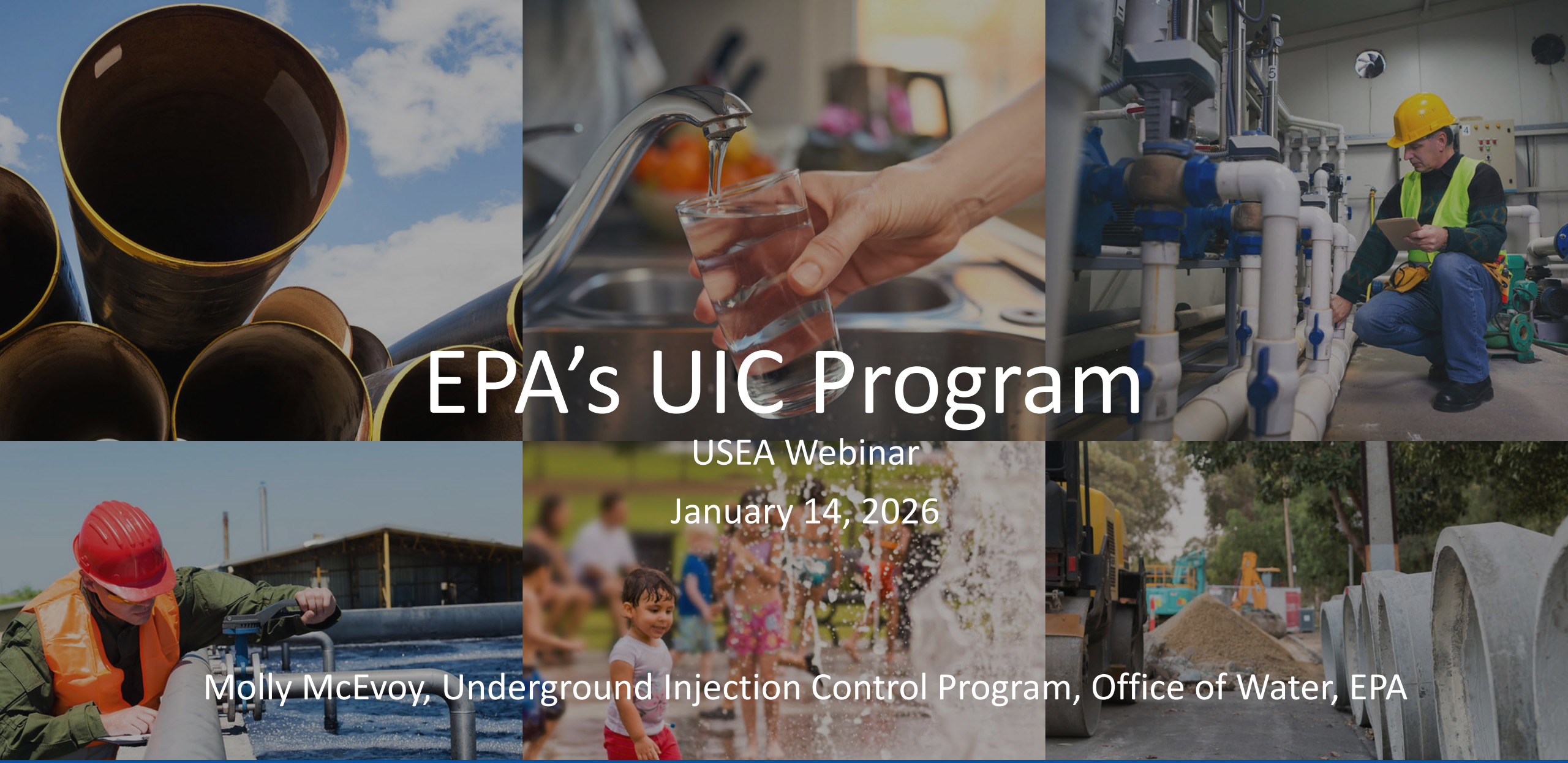

EPA's UIC Program

USEA Webinar

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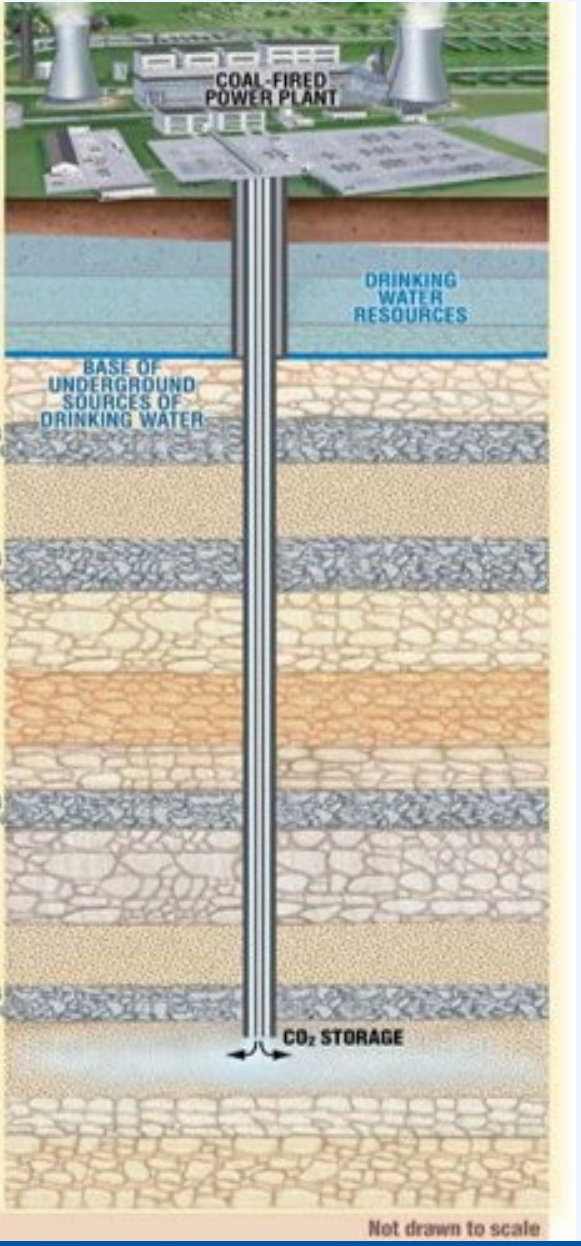
Molly McEvoy, Underground Injection Control Program, Office of Water, EPA

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 from 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

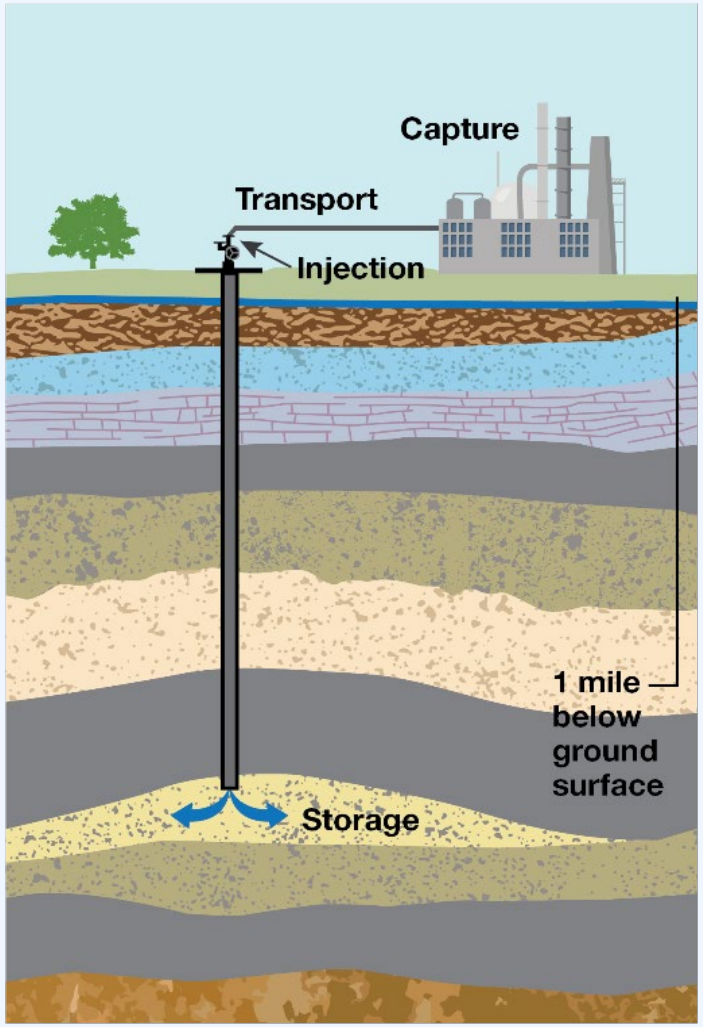
Class III: Fluids to dissolve and extract minerals

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 are Class VI GS wells?

- Class VI wells are used to inject CO_2 into deep rock formations for purposes geologic sequestration (GS).
- 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).
- EPA has issued permits for 18 Class VI injection wells, 14 of which are active.

UIC Regulations Cover a GS Project from Start to Finish

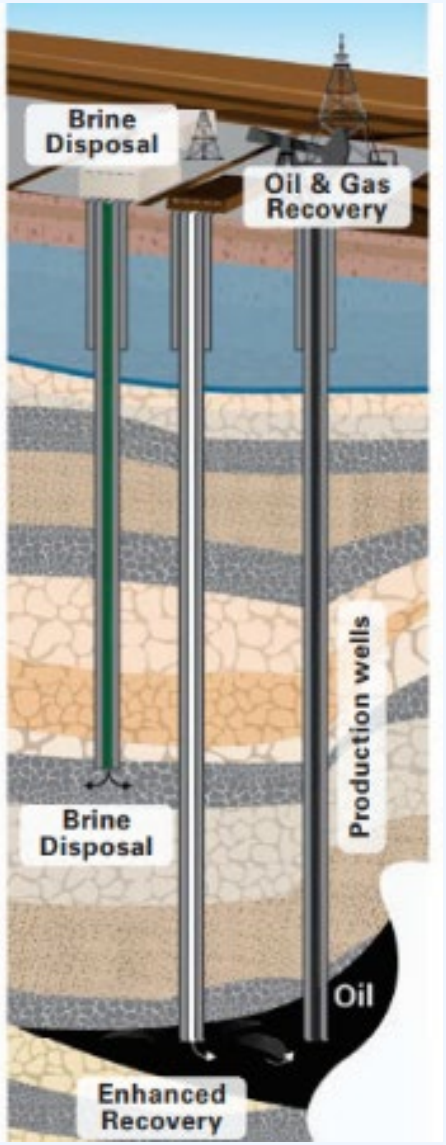
- Siting (selection of location)
- Permitting
- Well Construction
- Operations
- Well and Site Closure

UIC Class VI 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 from the risks associated with GS.
- Tracking the movement of the "plume" of CO_2 and any other potential changes in the subsurface.
- 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.

Enhanced Recovery (ER) and UIC Class II Regulations



What are Class II ER wells?

- Class II wells are used only to inject fluids associated with oil and natural gas production. Class II fluids are primarily brines (salt water) but may include CO_2. Class II wells include disposal, hydrocarbon storage, and ER wells.
- Class II ER wells are used to inject fluids into oil-bearing formations to recover residual oil and, in limited applications, natural gas.
- Approximately 180,000 Class II wells are in operation in the U.S., and approximately 80% of these are ER wells.

EPA Class II Regulations Cover an ER Project from Start to Finish

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

UIC Class II regulations are designed to protect USDWs during Class II operations.

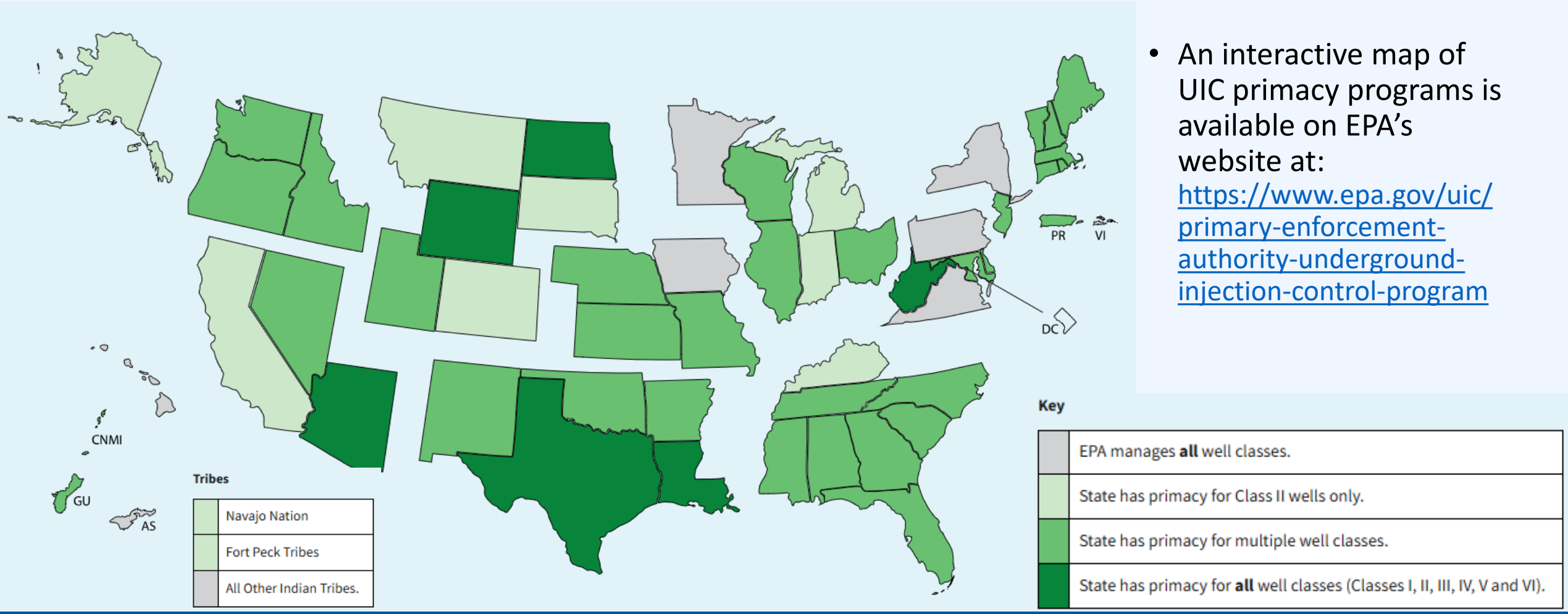
- Protective aspects of UIC Class II regulations include construction, operating, monitoring, and reporting requirements. (Specific requirement may differ by primacy states, discussed in later slides.)
- EPA regulations for Class II wells were developed to address the specific risks to USDWs associated with Class II activities. The risk of endangerment to USDWs for ER activities is not the same as GS, therefore, the operations are subject to different requirements than for GS.
- Regulations regarding transitioning from Class II to Class VI can be found at 40 CFR 144.19.

What is UIC Primacy?

- A state, territory, or Tribe with UIC primacy, or primary enforcement responsibility, oversees the EPA-approved UIC program in that state, territory, or Tribe.
- EPA has developed UIC program requirements that are designed to be adopted by states, territories, and Tribes.
- Primacy programs are established under the SDWA sections 1422 and 1425.
  - Section 1422 applies to all well classes and requires primacy applicants to meet the EPA's minimum requirements for UIC programs.
  - Section 1425 applies to Class II wells only and requires primacy applicants to demonstrate their standards are effective in preventing endangerment of USDWs.
- EPA retains an oversight role over state UIC primacy programs.

	SDWA Section 1422	**SDWA Section 1425**
Program Requirements	Meets minimum EPA requirements for UIC programs	Demonstrate standards are effective in preventing endangerment of USDWs
	Demonstrate to the EPA that the state, territory, or Tribe has jurisdiction over underground injection and the necessary administrative, civil and criminal enforcement penalty remedies.	
Well Class Applicability	· All well classes · Classes I – V · Class VI	Class II

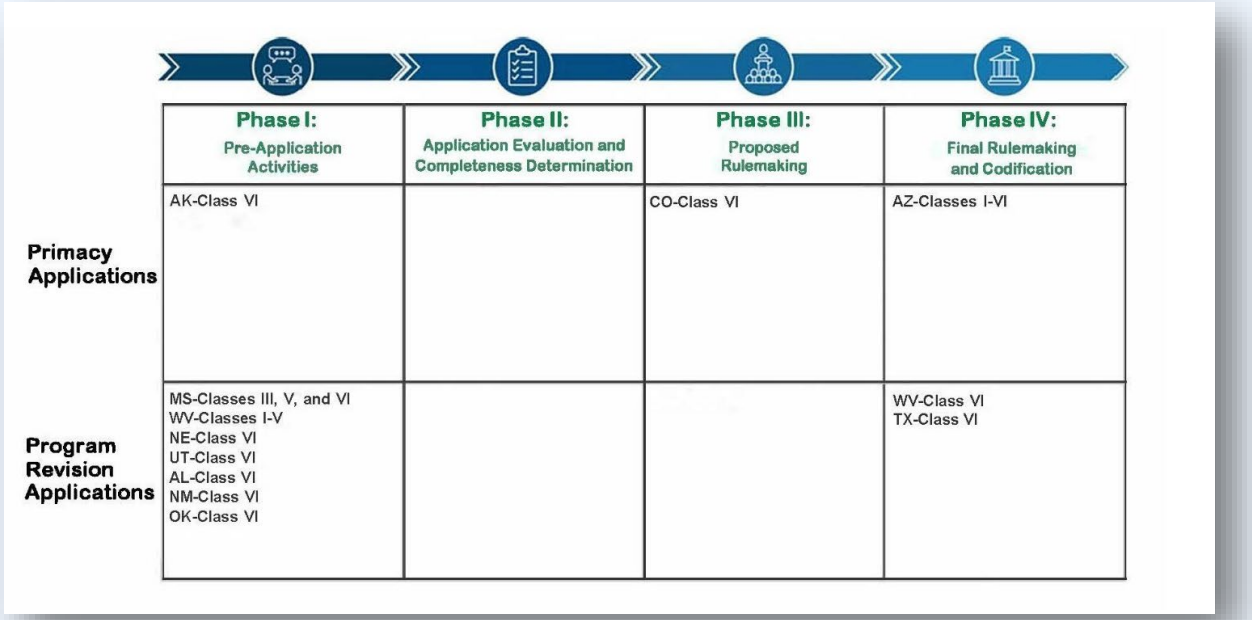
Approved UIC Primacy Programs



- An interactive map of UIC primacy programs is available on EPA's website at: https://www.epa.gov/uic/primary-enforcement-authority-underground-injection-control-program

UIC Class II and VI Primacy

- Six states have been granted Class VI Primacy
  - Arizona (2025), Louisiana (2024), North Dakota (2018), Texas, (2025), West Virginia (2025), Wyoming (2020)
- Eight other states are currently working with EPA on developing their Class VI primacy applications
- 47 states, territories, and Tribes have Class II primacy



	Phase I: Pre-Application Activities	Phase II: Application Evaluation and Completeness Determination	Phase III: Proposed Rulemaking	Phase IV: Final Rulemaking and Codification
Primacy Applications	AK-Class VI		CO-Class VI	AZ-Classes I-VI
Program Revision Applications	MS-Classes III, V, and VI WV-Classes I-V NE-Class VI UT-Class VI AL-Class VI NM-Class VI OK-Class VI			WV-Class VI TX-Class VI

Visit EPA's UIC Webpages for Additional Information on Each Well Class and Primacy https://www.epa.gov/uic

Questions?