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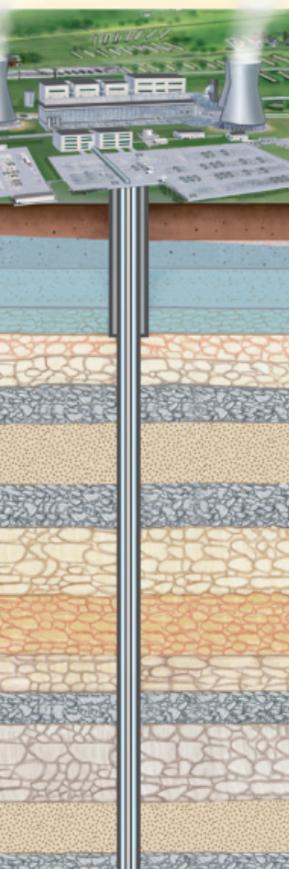
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Withdrawn:

Stricken:

NRC-035

Protecting Drinking Water Through Underground Injection Control



EPA

United States
Environmental Protection
Agency

Office of Water (4606M)
EPA 816-K-10-004
March 2012
<http://water.epa.gov/drink/>

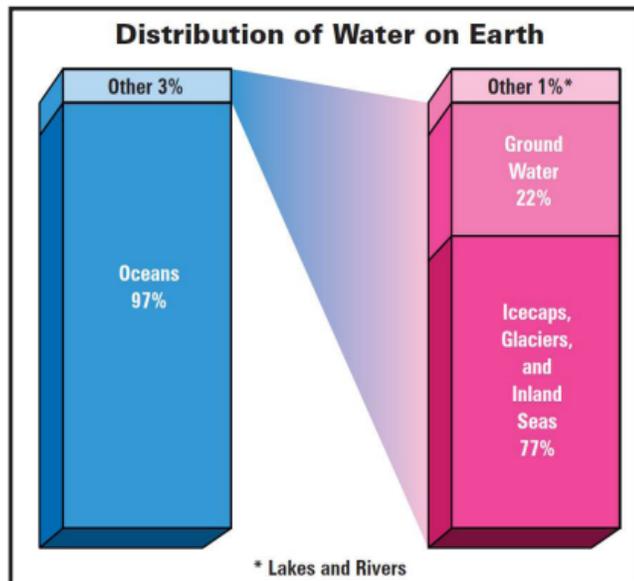
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Importance of Drinking Water

Water is one of our most vital resources; it is essential for life. Over 80 percent of the earth is covered by water. Most water fit for drinking is frozen in glaciers. The remaining fresh water is largely found below our feet in aquifers. More than 90 percent of all public drinking water systems rely on water found in aquifers to supply the population with drinking water. Aquifers also supply water for agriculture, feed our lakes and provide recharge to our streams and rivers. In addition, millions of Americans living in rural areas rely on private wells.



Protecting this resource from source to tap is essential to the health of the public and the economic health of communities.

At the same time, Americans generate large amounts of waste fluids. These fluids may come from industries, municipalities and small businesses. Other fluids are used for primary or secondary extraction of mineral resources. Each year more than 750 billion gallons of hazardous and non-hazardous fluids are disposed of through underground injection.

EPA's Underground Injection Control (UIC) Program ensures that these fluids are injected safely and cost effectively while fulfilling the mission to protect underground sources of drinking water (USDWs) from contamination by regulating the location, construction, operation and closure of injection wells. This booklet summarizes UIC Program basics and the minimum federal requirements for an effective UIC Program.

Safe Drinking Water Act (UIC Related Sections)

Sections of the Safe Drinking Water Act (SDWA) require EPA to provide safeguards so that injection wells do not endanger current and future USDWs.

Section	Description
1421	Identifies what state regulations must include —Sets out the framework for the minimum federal requirements that states must meet in order to have primary enforcement responsibility (primacy) for the UIC Program. State regulations must contain minimum requirements for effective programs (e.g., inspection, monitoring and recordkeeping) to prevent underground injection that endangers USDWs.
1422	Outlines the process for state primacy applications , including timelines and public participation requirements. If a state does not obtain primacy, EPA will assume direct implementation responsibility. This section also allows tribes to obtain primacy.
1423	Sets forth enforcement of the program —Civil and criminal actions are described, including the amount of any penalty levied.

Section	Description
1425	<p>Describes optional demonstrations a state may make for the portion of the UIC Program relating to oil and natural gas operations—Allows EPA approval of existing state oil and gas programs if the state can demonstrate that the program meets the requirements of 1421 and represents an effective program to prevent underground injection that endangers drinking water resources.</p>
1426	<p>Requires the Administrator to determine the applicability of monitoring methods and calls for EPA to submit a Report to Congress for Class V wells. The Report to Congress included information on Class V inventory, well types, design and construction recommendations and risk associated with wastes discharged. (See pages 22-24 for more information.)</p>
1431	<p>Authorizes emergency powers for EPA to take action in a state if there is an imminent and substantial endangerment.</p>
1442	<p>Addresses EPA's authority to conduct research, studies, training and demonstrations, specifically looking at improved methods for protecting USDWs.</p>
1443	<p>Establishes grants for primacy programs.</p>

Key Concepts

Aquifer: An underground geologic formation, or group of formations, containing usable amounts of ground water that can supply drinking water wells or springs.

Geologic sequestration (GS) of carbon dioxide (CO₂): The long-term containment of a gaseous, liquid or supercritical CO₂ stream in subsurface geologic formations.

Underground source of drinking water (USDW): An aquifer or portion of an aquifer that:

1. Supplies any public water system, or
2. Contains a quantity of ground water sufficient to supply a public water system, and
 - Currently supplies drinking water for human consumption, or
 - Contains fewer than 10,000 mg/L total dissolved solids (TDS) and is not an exempted aquifer.

Well:

- A bored, drilled or driven shaft whose depth is greater than the largest surface dimension, or
- A dug hole whose depth is greater than the largest surface dimension, or
- An improved sinkhole, or
- A subsurface fluid distribution system.

Well injection: Subsurface emplacement of fluids through a well.

SDWA UIC Program Principles

Non-endangerment: SDWA prohibits injection that endangers USDWs. Underground injection is considered to endanger drinking water sources if such injection may result in the presence of any contaminant in underground water that supplies, or can reasonably be expected to supply, any public water system, and if the presence of the contaminant may result in the system's not complying with any national primary drinking water regulation or otherwise adversely affect the health of persons.

Primacy: EPA is directed to establish minimum federal requirements for state and tribal UIC programs. States and tribes then apply to EPA to obtain primary enforcement responsibility, or primacy, to administer the UIC Program. Primacy programs must meet the minimum federal requirements and may have more stringent requirements. To date, 33 states, Guam, the Commonwealth of the Northern Mariana Islands, and Puerto Rico have obtained primacy for all classes of injection wells. Seven states and two tribes share primacy with EPA. For the remaining states, tribes, the District of Columbia, the Virgin Islands, and American Samoa, EPA is directly implementing UIC programs. (See map on page 35.)

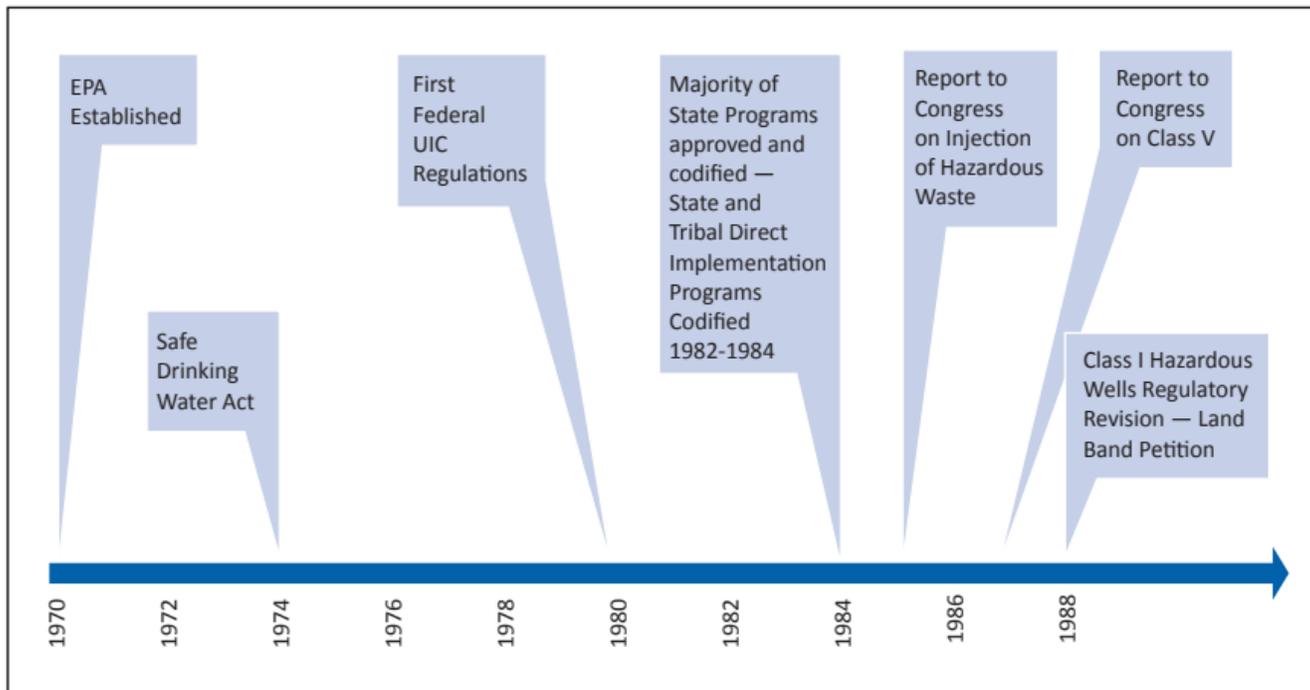
EPA Injection Well Classification System

Well Class	Injection Well Description	Approximate Inventory
Class I	<ul style="list-style-type: none">– Inject hazardous wastes beneath the lowermost USDW.– Inject industrial non-hazardous fluids beneath the lowermost USDW.– Inject municipal wastewater beneath the lowermost USDW.– Inject radioactive waste beneath the lowermost USDW.	650
Class II	<ul style="list-style-type: none">– Inject fluids which are brought to the surface in connection with oil or natural gas production and some natural gas storage operations.– Inject fluids for enhanced oil or natural gas recovery.– Inject liquid hydrocarbons for storage.	150,851
Class III	Inject fluids for the extraction of minerals.	21,368

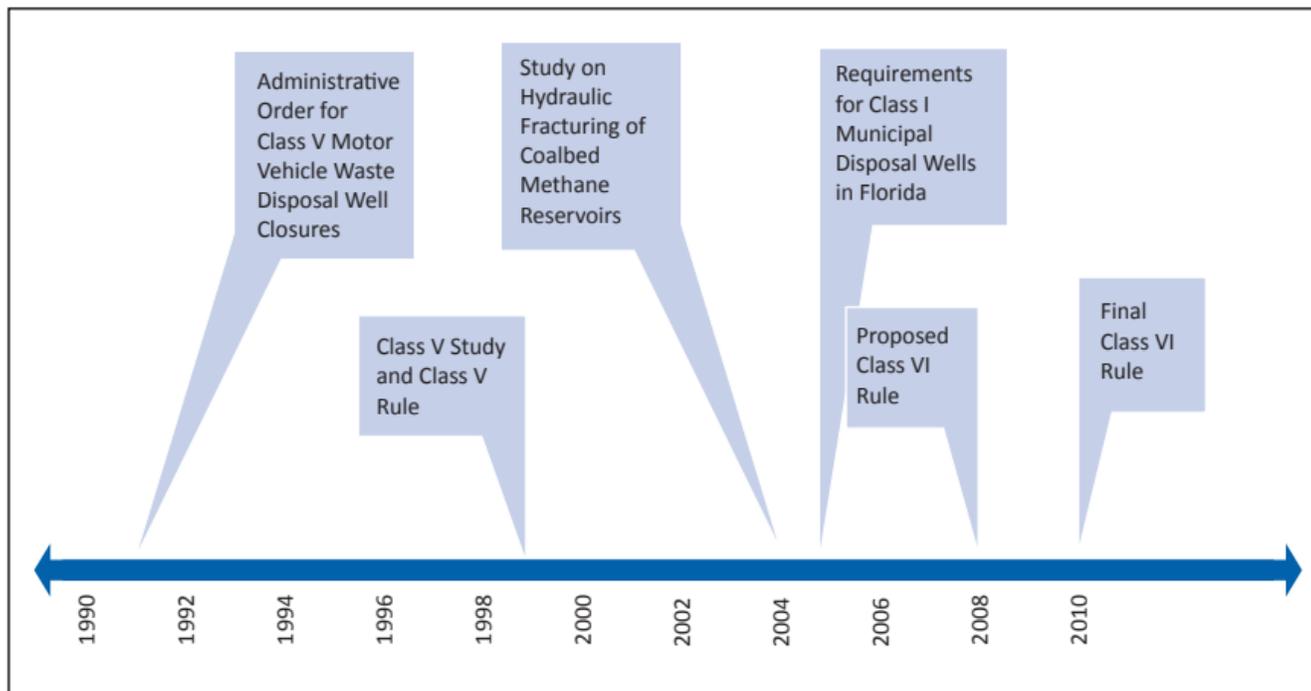
Well Class	Injection Well Description	Approximate Inventory
Class IV	Inject hazardous or radioactive waste into or above a USDW. This activity is currently banned unless it is part of an authorized cleanup.	24 sites
Class V	Wells not included in the other classes.	400,000 to 650,000
Class VI	<ul style="list-style-type: none"> – Wells that are not experimental in nature that are used for GS of CO₂ beneath the lowermost formation containing a USDW. – Wells used for GS of CO₂ that have been granted a waiver of the injection depth requirements pursuant to requirements at 40 Code of Federal Regulations (CFR) 146.95. – Wells used for GS of CO₂ that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to 40 CFR 146.4 and 144.7(d). 	N/A*

*This guide was published in 2012; there were no Class VI wells as of publication.

UIC Historical Timeline



UIC Historical Timeline, continued



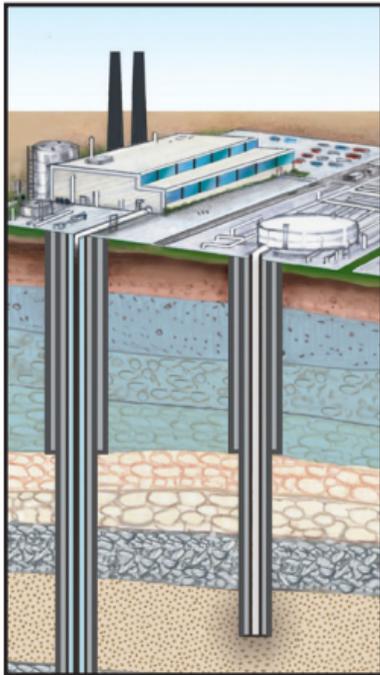
The Five Pathways of Contamination

The UIC Program prevents contamination via the pathways described below through regulations that prohibit movement of fluid into USDWs (40 CFR 144.12).

Pathway	Owner/Operator Must Demonstrate	UIC Program Requirements
1. Faulty Well Construction: Leaks in well casing or fluid escaping between well's outer casing and well bore.	No significant leaks or fluid movement in well bore (mechanical integrity).	Permits; Mechanical integrity tests (MIT); Inspections; File reviews; Corrective action (CA) on wells with MIT failure; Enforcement; Closures.
2. Nearby Wells: Fluids from pressurized area in injection zone may escape through wells in injection area.	Properly construct or plug wells that penetrate injection zone. Submit plans for plugging and abandonment with permit applications. Submit plugging and abandonment (P&A) reports prior to closing any well.	Permits; File reviews; CA on problem wells in area of review (AoR); Inspections; Enforcement; Closures.

Pathway	Owner/Operator Must Demonstrate	UIC Program Requirements
3. Faults or Fractures in Confining Strata: Fluids may leak out of pressurized area through faults/fractures in confining beds.	Wells are sited to inject below an unfractured confining bed. Monitor injection pressure to prevent fractures in injection zone or in confining bed.	Permits; File reviews; MITs; Inspections; Monitoring record reviews; CA on wells with MIT failure; Enforcement; Closures.
4. Direct Injection: Inject fluids into or above USDWs.	Fluids do not endanger. Must submit inventory prior to injection.	Permits; Outreach and compliance assistance; Inspections; Enforcement; Closures; Inventory.
5. Displacement: Fluid may be displaced from injection zone into hydraulically connected USDWs.	Proximity of injection wells to USDWs so permitting authority can confirm proper siting. Control injection pressure; conduct monitoring and testing to track future fluid migration.	Permits; MITs; CA on wells with MIT failure; Inspections; Enforcement; Closures.

Class I Wells—*Isolate hazardous, industrial and municipal wastes through deep injection.*



Purpose: Regulate and manage safe injection of hazardous, industrial or municipal waste beneath the lowermost USDW; prohibit movement of fluid into USDWs.

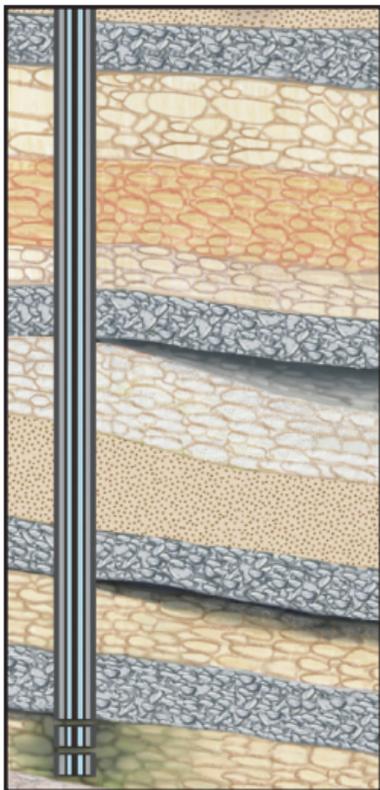
Examples of Fluids:

- Manufacturing and mining wastewater.
- Hazardous waste under the Resource Conservation and Recovery Act (RCRA).
- Treated municipal effluent.
- Radioactive waste.

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs.
- Tubing and packer appropriate for injected wastewater.
- Sited in geologically stable areas.
- Determine impact of placing a new well close to existing



wells. Minimum AoR radius is 2 miles for hazardous waste wells and $\frac{1}{4}$ mile for non-hazardous waste wells.

Monitoring and Testing

- Hazardous waste wells: internal MIT every year, external MIT every 5 years.
- Non-hazardous waste wells: internal and external MIT every 5 years.
- Yearly monitoring required of injection operation.
- Monitoring wells to supplement ambient monitoring are authorized.

Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstrating of financial responsibility.

Regulatory Citations:

- 40 CFR 144 Subparts A–F
- 40 CFR 146 Subpart A
- 40 CFR 146.11–146.14, 146.61–146.73
- 40 CFR 148 (all) for hazardous waste wells

Class I Municipal Disposal Wells in Florida

Regulations for Class I Municipal Disposal Wells

For more than 20 years, some municipalities in Florida have been using underground injection as an alternative to surface disposal of treated domestic wastewater. In November 2005, EPA published an amendment to the federal UIC regulations for Class I municipal disposal wells in certain counties of Florida. This updated requirement offers owners and operators of these municipal disposal wells the ability to continue to operate their wells, provided they meet additional wastewater treatment requirements.

The updated requirement addresses evidence suggesting that, at several wells, the injected fluids were migrating into USDWs. Because the UIC Program prohibits the operation of Class I wells with fluid movement into a USDW, the associated treatment facilities would need to cease injection and adopt an alternative method to manage their wastewater, which could increase environmental risks to surface water and coastal environments.

Requirements for USDW Protection

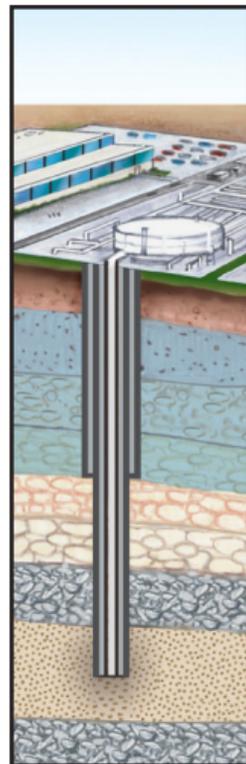
This updated requirement involves rigorous control of the quality of the fluids by requiring these facilities to treat their municipal wastewater with pretreatment, secondary treatment

and high-level disinfection before they are injected. Under this approach, the movement of fluids into USDWs, whether known or suspected, should not endanger the USDWs because the quality of the wastewater has been treated to a level that is no longer a threat to USDWs. This action shifts the endangerment protection strategy used for Class I municipal disposal wells in certain counties of Florida from the no fluid movement standard to an alternate approach that relies on treatment of wastewater before it is injected.

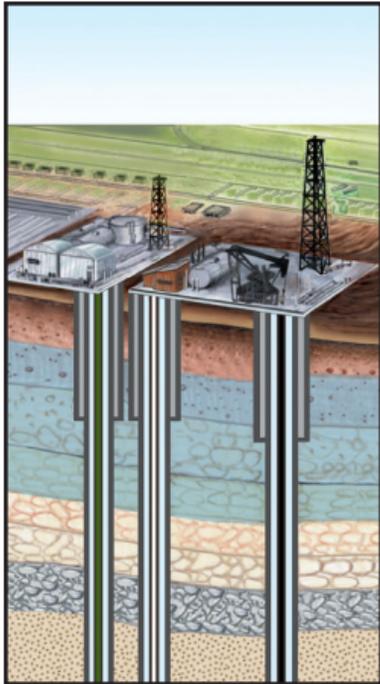
This modification, however, does not undercut the protection of USDWs or weaken the UIC Program requirements. Facility owners and operators in the designated counties must comply with all other applicable UIC requirements to ensure that their injection wells do not endanger USDWs.

Regulatory Citations:

- 40 CFR 144 Subparts A–E
- 40 CFR 146 Subpart A
- 40 CFR 146.11–146.14
- 40 CFR 146.15 and 146.16



Class II Wells—*Injection wells associated with oil and gas production.*



Purpose: Regulate and manage safe injection (1) of fluid brought to the surface in connection with oil and gas production and some natural gas storage operations, (2) for enhanced recovery of oil or natural gas, or (3) for hydrocarbon storage operations. Prohibit movement of fluids into USDWs.

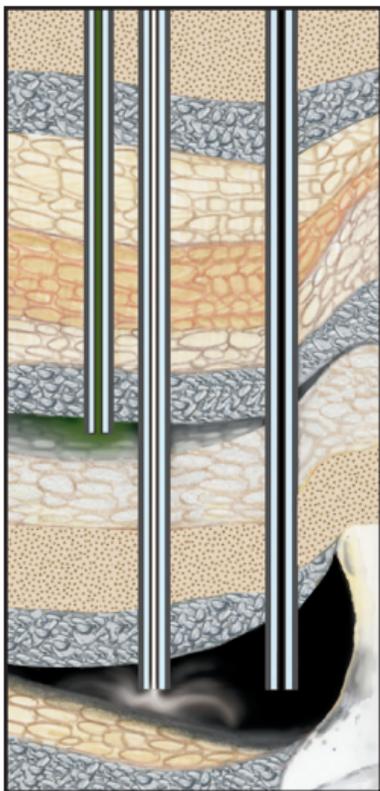
Examples of Fluids:

- Produced high salinity brine.
- Crude oil (for storage).
- Polymers and viscosifiers for enhanced recovery wells.
- Drilling fluids and muds.

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs.



- Construction and design of well (casing, tubing and packer) varies.

Monitoring and Testing

- Internal/external MIT.
- Periodic monitoring and reporting.

Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility.

Regulatory Citations:

- 40 CFR 144 Subparts A–E
- 40 CFR 146 Subparts A and C

Class III Wells—*Minimize environmental impacts from solution mining operations.*



Purpose: Regulate and manage safe injection of fluids or leaching agents to dissolve specific salts/minerals for extraction and recovery; prohibit movement of fluid into USDWs.

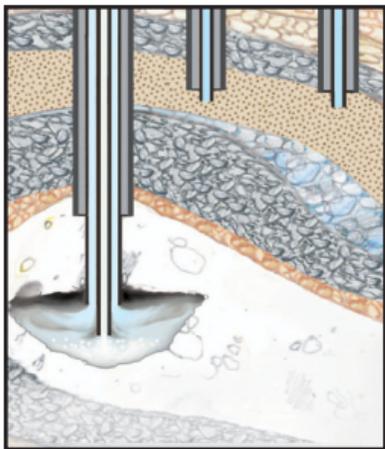
Examples of Fluids:

- Fresh water to extract rock salt (NaCl).
- Sodium bicarbonate to extract uranium salts.
- Steam to extract sulfur.
- Proprietary solutions to extract other minerals and metals.

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs.
- Tubing and packer appropriate for injected fluids.



Monitoring and Testing

- Nature of injected fluid.
- Injection pressure or injectate rate or volume.
- Internal/external MIT.
- Frequent testing of fluids in the injection zone.
- Monitoring wells in adjacent USDWs.

Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility.

Regulatory Citations:

- 40 CFR 144 Subparts A–E
- 40 CFR 146 Subparts A and D

Class IV Wells—*Prevent ground water contamination by prohibiting the injection of hazardous or radioactive waste above the lowermost USDW except as part of authorized cleanup activities.*

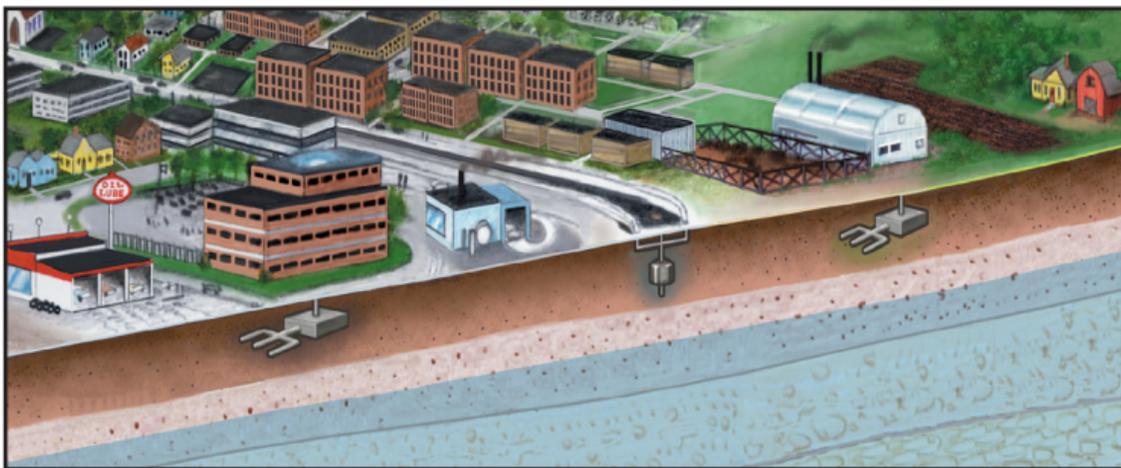


Class IV wells were created for the injection of hazardous or radioactive wastes into or above USDWs. The use of Class IV wells to dispose of waste was banned in 1984. However, these wells are authorized when operated to inject treated contaminated ground water back into the original aquifer as part of a clean-up effort and may only be operated with federal or state approval under the RCRA or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) programs. Owners and operators of Class IV wells must still meet all UIC Program requirements.

Regulatory Citation: 40 CFR 144.13

Class V Wells — *Injection wells not included in Classes I, II, III, IV or VI.*

Purpose: Regulate and manage injection of wells not covered by regulations for the other well classes. Typically, Class V wells are used for safe injection of non-hazardous fluids through on-site disposal systems such as dry wells, septic systems, leach fields and similar types of drainage wells, and deeper wells.



Examples of Class V Wells:

- Wastewater disposal: wells for the injection of cooling water, car wash water, food processing wastes, drainage from agricultural activities or treated sanitary wastes (see note on page 24); wells used to drain surface fluids into a subsurface formation.
- Mining and energy: wells for mine backfill, geothermal energy production activities or brine return from mineral recovery and energy production.
- Other purposes: wells for aquifer remediation, aquifer recharge, aquifer storage and recovery, subsidence control or saline intrusion barriers; experimental technology wells.

Protective Requirements:

- Cannot endanger USDWs (40 CFR 144.12, which prohibits the movement of fluids with contaminants into USDWs, applies to Class V wells).
- Submit inventory information to the UIC Program Director.
 - Specific additional information is required for certain types of wells listed in 40 CFR 144.83(a)(2)(ii).
- Large capacity cesspools and motor vehicle waste disposal wells permanently phased out by the Class V Rule (1999).

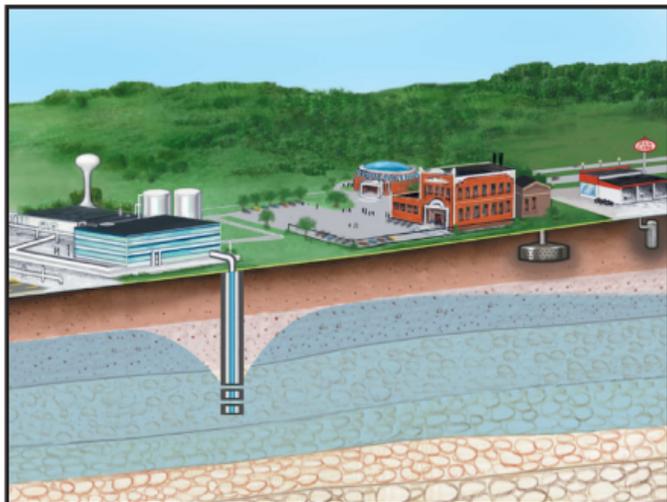
Permits and Monitoring:

- Most Class V wells are authorized by rule.
- States and EPA can require any well owner or operator to obtain an individual permit, monitor injectate or close the well if there is a potential to endanger USDWs.

Regulatory Citations:

- 40 CFR 144 Subparts A - E and G
- 40 CFR 146 Subpart A

Note: The UIC Program does not regulate individual residential septic systems, nor does it regulate nonresidential septic systems with the capacity to serve fewer than 20 persons per day and that are used solely for sanitary waste.



Class VI Wells



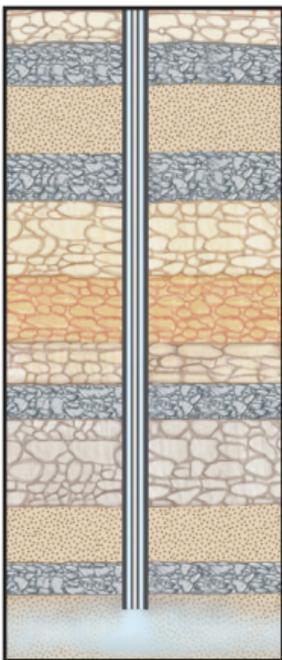
In 2010, EPA finalized the *Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO₂) Geologic Sequestration (GS) Wells* (FR Vol. 75, No. 237, pp. 77230-77303), known as the Class VI Rule. The Class VI Rule establishes minimum federal standards for a new class of injection wells for GS of CO₂.

Geologic Sequestration

Geologic sequestration wells are used for the long-term containment of a gaseous, liquid or supercritical CO₂ stream in subsurface geologic formations.

Protective Requirements Unique to Class VI

The elements of the Class VI Rule build upon the existing UIC regulatory framework, with modifications tailored to the unique nature of CO₂ injection for GS. These requirements are listed on the following page.



Construction and Siting

- Comprehensive geologic site characterization.
- Specific, enhanced requirements for well construction and operation.
- Periodic reevaluation of the AoR.

Monitoring and Testing

- Rigorous testing and monitoring, including internal/external MIT.
- Extended post-injection monitoring and site care.

Recordkeeping and Reporting

- Electronic reporting directly to EPA Headquarters.
- Requirements for the development, implementation and periodic amendment of a series of site-specific project plans.

Other Aspects of the Class VI Rule

- Clarified and expanded financial responsibility requirements.
- An alternative approach to the injection depth requirements on a site-specific basis.
- Considerations for permitting wells that are transitioning from Class II enhanced recovery to Class VI GS.

Regulatory Citations:

- 40 CFR 144 Subparts A–B and D–E
- 40 CFR 146 Subparts A and H

EPA UIC Strategic Program Priorities

Base Program: Classes I–IV

- Maintain and improve the core program.
- Establish a meaningful and useful data management system.

Class V

- Develop a comprehensive inventory.

Class VI

- Provide owners or operators flexibility in requirements for GS of CO₂.
- Monitor early commercial projects closely with cooperation from other federal and state co-regulators and partners.

All Classes

- Protect USDWs.
- Better integrate the UIC Program with SDWA and other programs (i.e., Clean Water Act, RCRA and CERCLA/Superfund).
- Expand outreach and education.

UIC Program Implementation Milestones

Well Class	Date	Activity
Class I Hazardous	March 2001	Study of the Risks Associated with Class I Underground Injection Wells published
Class I Municipal	Spring 2003 Nov. 2005	South Florida Wastewater Study published Class I Municipal Well Final Rule
Class II	June 2004	Coalbed Methane Hydraulic Fracturing Study published
Class V	April 2000 April 2005 April 2000– Jan. 2008 March 2007	New large capacity cesspools and motor vehicle waste disposal wells banned Existing large capacity cesspools closed Existing motor vehicle waste disposal wells closed or obtained a permit in regulated areas Class V GS Experimental Technology Well Guidance released
Class VI	July 2008 Dec. 2010	Class VI Proposed Rule Class VI Final Rule

Importance of UIC Program to Source Water and Other Watershed Activities

Underground Injection Control is one of many activities that help ensure tap water is safe to drink. A variety of safeguards, from the drinking water source to the consumer's tap, form multiple barriers against contamination. The UIC Program works to protect USDWs from contamination by regulating the construction, operation and closure of injection wells.

Other protective barriers include:

- Assessing the vulnerability of drinking water sources to contamination.
- Adopting community drinking water programs to protect wells and collection systems.
- Making sure water is treated by qualified operators.
- Ensuring the integrity of distribution systems.
- Setting regulations to control the level of contaminants in tap water.
- Making information available to the public on drinking water quality.

EPA, states, tribes, drinking water utilities, communities and citizens share the responsibility of protecting America's drinking water.

Did You Know?

- Eighty-nine percent of the hazardous waste that is land disposed in the United States is disposed of through Class I wells.
- More than 700 million gallons of fluids are injected into Class II wells each year.
- Typically, in North American oil fields, 10 gallons of brine are produced for each gallon of oil.
- More than 50 percent of the salt and 80 percent of the uranium extraction in the United States involves the use of Class III wells.
- The majority of Class V well owners are small businesses and municipalities.
- The two most numerous types of Class V wells are storm water drainage wells and large capacity septic systems.
- Ninety-five percent of the 500 largest stationary sources in the nation that emit CO₂ are within 50 miles of a candidate CO₂ storage reservoir.

Glossary

Carbon dioxide (CO₂) stream—CO₂ that has been captured from an emission source (e.g., a power plant), plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process. This does not apply to any CO₂ stream that meets the definition of a hazardous waste under 40 CFR 261.

Casing—Pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas or other fluid from entering or leaving the hole.

Dry well—A well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

Enhanced oil/gas recovery—Typically, the process of injecting a fluid (any substance which flows or moves, e.g., water, brine, CO₂) into an oil- or gas-bearing formation to

recover residual oil or natural gas. The injected fluid thins (decreases the viscosity) and/or displaces extractable oil and gas, which is then available for recovery.

Geologic sequestration (GS) of CO₂—The long-term containment of a gaseous, liquid or supercritical CO₂ stream in subsurface geologic formations.

Improved sinkhole—Typically, a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings, which has been modified for the purpose of directing and emplacing fluids into the subsurface.

Mechanical integrity test (MIT)—One means of measuring the adequacy of construction of an injection well is by requiring a demonstration that a well has mechanical integrity. A well is deemed to have mechanical integrity if there is no significant leak in the casing, tubing, or packer, and there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection wellbore (40 CFR 146.8).

Packer—A device lowered into a well to produce a fluid-tight seal between the tubing and the casing or the tubing and the open hole. Packers can be used to separate multiple

injection zones, to protect casing from injection pressure and fluids, to isolate a given injection zone, to isolate casing leaks or to facilitate subsurface safety control.

Post-injection site care (PISC)—Appropriate monitoring and other actions (including corrective action) needed following cessation of injection to ensure that USDWs are not endangered, as required for Class VI wells under 40 CFR 146.93.

Public water system—A water system that provides water to the public for human consumption through pipes or other constructed conveyances, if such a system has at least 15 service connections or regularly serves an average of at least 25 people daily at least 60 days out of the year.

Sanitary waste—Liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, and other commercial facilities and industrial facilities provided the waste is not mixed with industrial waste.

Septic system—A well that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

Subsurface fluid distribution system—An assemblage of perforated pipes, drain tiles or other similar mechanisms intended to distribute fluids below the surface of the ground.

Tubing—The innermost pipe string through which injection usually takes place. It is often separated from concentric strings of casing by an annular fluid and can be removed easily from the well. In wells without tubing, the innermost casing can be referred to as the injection casing.

Well—A bored, drilled or driven shaft whose depth is greater than the largest surface dimension; a dug hole whose depth is greater than the largest surface dimension; an improved sinkhole; or a subsurface fluid distribution system.

Contacts

EPA REGION 1	(617) 918-1681
Connecticut Department of Environmental Protection	(860) 424-3829
Maine Department of Environmental Protection	(207) 791-8110
Massachusetts Department of Environmental Protection.....	(617) 292-5859
New Hampshire Department of Environmental Services	(603) 271-2858
Rhode Island Department of Environmental Management.....	(401) 222-3961
Vermont Department of Environmental Conservation	(802) 241-3831
Indian Lands in Region 1 States—EPA Region 1	(617) 918-1681
EPA REGION 2	(212) 637-3766
New Jersey Department of Environmental Protection	(609) 633-7021
New York —EPA Region 2.....	(212) 637-3766
Puerto Rico Environmental Quality Board	(787) 767-8181 x3477 or 3478

Virgin Islands —EPA Region 2	(212) 637-3766
Indian Lands in Region 2 States—EPA Region 2	(212) 637-3766
EPA REGION 3	(215) 814-5445
Delaware Department of Natural Resources and Env. Control	(302) 739-9948
Maryland Department of the Environment	(410) 537-3663
Pennsylvania —EPA Region 3	(215) 814-5445
Virginia —EPA Region 3	(215) 814-5445
West Virginia Division of Environmental Protection	(304) 926-0499
District of Columbia —EPA Region 3	(215) 814-5445
EPA REGION 4	(404) 562-9424
Alabama Department of Environmental Management (non-Class II)	(334) 271-7844
Alabama State Oil and Gas Board (Class II)	(205) 247-3575
Florida Department of Environmental Protection (non-Class II)	(850) 245-8655
Florida —EPA Region 4 (Class II)	(404) 562-9452
Georgia Environmental Protection Division	(404) 656-3229

Kentucky —EPA Region 4	(404) 562-9423
Mississippi Department of Environmental Quality (non-Class II)	(601) 961-5640
Mississippi Oil and Gas Board (Class II).....	(601) 576-4931
North Carolina Department of Environment and Nat. Resources	(919) 715-6164
South Carolina Department of Natural Resources.....	(803) 898-3799
Tennessee —EPA Region 4	(404) 562-9474
Indian Lands in Region 4 States—EPA Region 4	(404) 562-9423
EPA REGION 5	(312) 886-6594
Illinois Environmental Protection Agency (non-Class II).....	(217) 785-9407
Illinois Department of Natural Resources (Class II).....	(217) 782-1286
Indiana —EPA Region 5 (non-Class II)	(312) 886-6594
Indiana Department of Natural Resources (Class II)	(317) 232-4058
Michigan —EPA Region 5	(312) 886-6594
Minnesota —EPA Region 5.....	(312) 886-6594

Ohio Environmental Protection Agency (non-Class II/III)	(614) 644-2752
Ohio Department of Natural Resources (Class II/III)	(614) 265-7072
Wisconsin Department of Natural Resources	(608) 267-7545
Indian Lands in Region 5 States—EPA Region 5	(312) 886-6594
EPA REGION 6	(214) 665-7150
Arkansas Department of Environmental Quality (non-Class II).....	(501) 682-0646
Arkansas Oil and Gas Commission (Class II).....	(870) 862-4965
Louisiana Department of Natural Resources	(225) 342-5569
New Mexico Environment Department (non-Class II)	(505) 827-1049
New Mexico Oil Conservation Division (Class II).....	(505) 476-3493
Oklahoma Department of Environmental Quality (non-Class II)	(405) 702-5142
Oklahoma Corporation Commission (Class II/some Class V)	(405) 522-2751
Texas Commission on Environmental Quality (non-Class II).....	(512) 239-6633
Texas Railroad Commission (Class II).....	(512) 463-6821
Indian Lands in Region 6 States—EPA Region 6	(214) 665-8460

EPA REGION 7	1-800-223-0425
Iowa —EPA Region 7	1-800-223-0425
Kansas Department of Health and Environment (non-Class II)	(785) 296-1500
Kansas Corporation Commission (Class II)	(316) 337-6200
Missouri Department of Natural Resources.....	(573) 368-2100
Nebraska Department of Environmental Quality (non-Class II)	(402) 471-0096
Nebraska Oil and Gas Conservation Commission (Class II)	(308) 254-6919
Indian Lands in Region 7 States—EPA Region 7	1-800-223-0425
 EPA REGION 8	 1-800-227-8917
Colorado —EPA Region 8 (non-Class II).....	(303) 312-6276
Colorado Oil and Gas Conservation Commission (Class II).....	(303) 894-2100 x5145
Montana —EPA Region 8 (non-Class II)	(303) 312-6242
Montana Board of Oil and Gas Conservation (Class II)	(406) 457-5015
North Dakota Department of Health (non-Class II/III)	(701) 328-5213

North Dakota Industrial Commission (Class II).....	(701) 328-8020
North Dakota Geological Survey (Class III).....	(701) 328-8000
South Dakota —EPA Region 8 (non-Class II)	(303) 312-6079
South Dakota Department of Env. and Natural Resources (Class II)	(605) 773-4589
Utah Department of Environmental Quality (non-Class II)	(801) 536-4352
Utah Department of Natural Resources (Class II).....	(801) 538-5338
Wyoming Department of Environmental Quality (non-Class II).....	(307) 777-5623
Wyoming Oil and Gas Conservation Commission (Class II).....	(307) 234-7147
Fort Peck Assiniboine & Sioux Office of Env. Protection (Class II)	(406) 768-2389
Other Indian Lands in Region 8 States—EPA Region 8.....	(303) 312-6079
EPA REGION 9	(415) 972-3971
Arizona —EPA Region 9.....	(415) 972-3293
California —EPA Region 9 (non-Class II).....	(415) 972-3537
California Department of Conservation (Class II).....	(916) 323-1781
Commonwealth of N. Mariana Islands Div. of Environmental Quality.....	(670) 664-8500

Guam Environmental Protection Agency	(671) 475-1658
Hawaii —EPA Region 9	(415) 972-3533
Nevada Division of Environmental Protection	(775) 687-9492
Navajo Nation Environmental Protection Agency (Class II)	(928) 871-7692
Other Indian Lands in Region 9 States—EPA Region 9.....	(415) 972-3457
EPA REGION 10	(206) 553-6708
Alaska —EPA Region 10 (non-Class II).....	(206) 553-1673
Alaska Oil and Gas Conservation Commission (Class II).....	(907) 973-1250
Idaho Department of Water Resources	(208) 287-4932
Oregon Department of Environmental Quality.....	(503) 229-6890
Washington Department of Ecology.....	(360) 407-6143
Indian Lands in Region 10 States—EPA Region 10	(206) 553-1900
EPA HEADQUARTERS—OFFICE OF GROUND WATER AND DRINKING WATER, PREVENTION BRANCH	(202) 564-3751

For More Information

EPA Office of Ground Water and Drinking Water

<http://water.epa.gov/drink/>

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