

← CLASS I WELLS

Isolate hazardous, industrial and municipal wastes through deep injection.

Class I wells inject hazardous and non-hazardous wastes into deep, isolated rock formations below the base of the USDW. There are specific siting, construction, operating, monitoring and testing, reporting and record keeping, permitting, and closure requirements for all Class I wells. There are two main types of Class I wells: hazardous and non-hazardous waste wells.

CLASS II WELLS →

Inject Exploration and Production (E&P) wastes and materials.

Class II wells inject fluids for enhanced recovery, hydrocarbon storage, or disposal E&P wastes. Most of the injected fluid is brine pumped to the surface along with oil and gas. This brine is RCRA Exempt E&P Waste. By injecting brine, Class II wells prevent surface contamination of soil and water. Enhanced Oil Recovery (EOR) Class II wells are used to inject residual brines, steam, polymers, and other fluids to enhance the production of oil and gas. Hydrocarbon Storage

Class II wells are utilized to inject hydrocarbons into solution mined salt caverns or depleted formations for underground storage. Class II well operators must follow strict construction and conversion requirements. Class II wells are permitted or authorized by rule; the well owner or operator must meet all applicable requirements; and the wells are tested and inspected regularly.



INJECTION WELLS

Each year Americans generate large amounts of waste fluids. More than 750 billion gallons of hazardous and non-hazardous fluids are disposed of safely through underground injection. However, illegal discharges of injected fluids have the potential to contaminate our drinking water resources. The Underground Injection Control (UIC) Program permits the safe construction and operation of injection wells in a manner that prevents contaminants from entering the underground sources of drinking water (USDW). The program is designed to provide a safe and cost effective means for industries, municipalities, and small businesses to dispose of their wastewater, extract mineral resources, and store water or hydrocarbons for the future, while protecting our drinking water resources and public health. This is vital because most accessible fresh drinking water is found underground in shallow formations (aquifers).

Five classes of injection wells are identified by EPA and State regulations: Class I- for industrial or municipal waste disposal; Class II- for enhanced oil recovery injection, oil/gas storage, or E&P Waste fluid disposal; Class III- solution mining wells; Class IV- wells injecting into the USDW (BANNED); and Class V- wells not covered under Classes I-IV.

CLASS V WELLS →

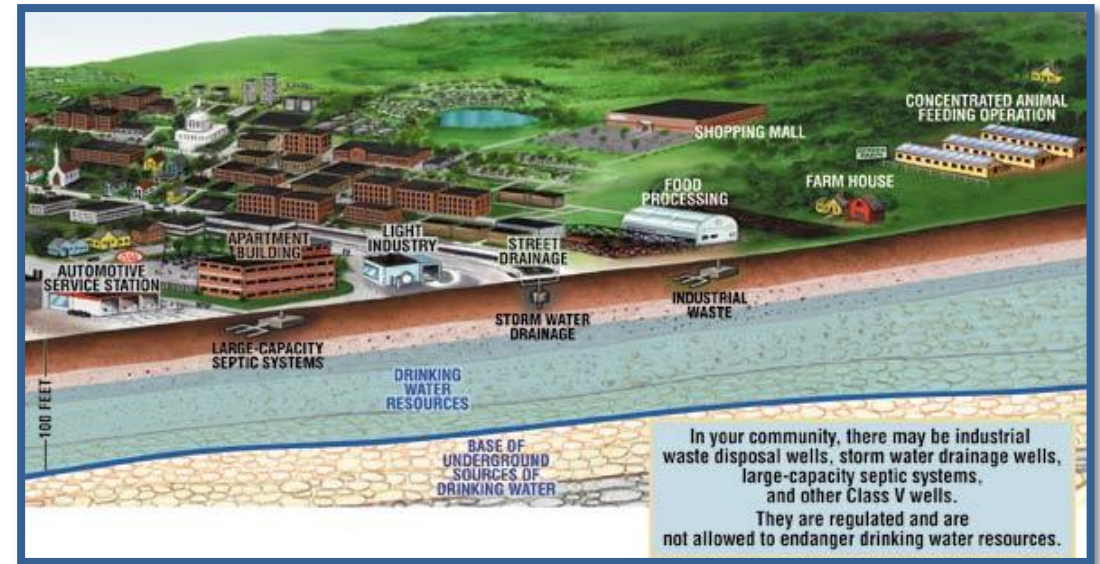
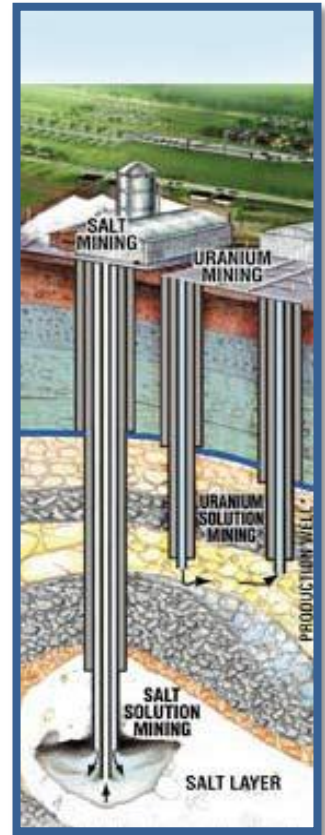
Manage the shallow injection of all other fluids.

Class V wells are injection wells that are not included in Classes I-IV. Class V wells inject non-hazardous fluids into or above an aquifer. They include Industrial Processed Waste Disposal Wells, Large-Capacity Cesspools, Large-Capacity Septic Systems, Motor Vehicle Waste Disposal Wells, Saline Intrusion Barrier Wells, Storm Water Drainage Wells, Aquifer Remediation Wells, Subsidence Control Wells, and more. When properly designed, sited, operated, and maintained, Class V wells do not endanger drinking water sources.

CLASS III WELLS →

Minimize environmental impacts from solution mining operations.

Class III wells inject fluids into rock formations to dissolve and extract minerals. The injected fluids are pumped to the surface and the minerals in solution are extracted. Generally, the fluid is recycled in the same formation for further mineral extraction. More than 50 percent of the salt and 80 percent of the uranium extraction in the United States involves Class III injection wells. These wells are permitted or authorized by rule. Class III well owners or operators must case and cement their wells, and the wells must be tested regularly.



In your community, there may be industrial waste disposal wells, storm water drainage wells, large-capacity septic systems, and other Class V wells. They are regulated and are not allowed to endanger drinking water resources.