

How are Class II Oil and Gas Disposal Wells Regulated?

A Class II oil and gas disposal well is a type of underground injection well associated with injection related to the exploration and production of oil and gas. The purposes for this class of injection well include the storage of hydrocarbons, disposal of produced water, disposal of other production wastes, pressure maintenance of hydrocarbon reservoirs, and enhanced hydrocarbon recovery. The practice of underground injection has a relatively long history (over 70 years) with states taking the initiative to develop regulatory programs for these wells. Congress enacted the Federal Safe Drinking Water Act (SDWA) of 1976 to establish minimum requirements for effective state Underground Injection Control (UIC) programs. The State of Texas was awarded “primary enforcement responsibility” for all UIC regulations of the SDWA on April 23, 1982, the first state to receive such designation. The Railroad Commission of Texas (RRC) rules were developed to either conform to or surpass federal regulations.

Because groundwater is a major source of drinking water in the United States, the UIC program requirements are designed to prevent contamination of Underground Sources of Drinking Water (USDWs) resulting from the operation of injection wells. A USDW is an aquifer, or a portion of an aquifer, that supplies any public water system or contains less than 10,000 milligrams per liter total dissolved solids.

Regulations mandate the consideration of a variety of measures to ensure that injection wells will not endanger USDWs. The UIC regulations establish specific performance criteria and well designs for each well class to ensure that drinking water sources, actual and potential, are not rendered unfit for such use by underground injection of the fluids common to that particular well class.

In Texas, the RRC regulates Class II disposal and injection wells through its federally delegated UIC Program. The RRC’s program follows the national requirements under the federal SDWA and has the objective of ensuring that Texas’ surface and subsurface water is free of pollution or contamination by ensuring proper completion, operation, and monitoring of oil and gas injection and waste disposal wells.

Resources and Useful Links

- For RRC Injection and Disposal Wells Frequently Asked Questions (FAQs), go to <https://www.rrc.texas.gov/about-us/faqs/oil-gas-faq/injection-and-disposal-wells-faqs/>
- The RRC’s Injection/Disposal Well Permitting, Testing, and Monitoring Manual can be found at <https://www.rrc.texas.gov/oil-and-gas/publications-and-notices/manuals/injection-storage-manual/>
- The RRC Groundwater Advisory Unit Geologic Isolation Requirements go to <https://www.rrc.texas.gov/media/znyobtzp/introduction-to-geologic-isolation.pdf>

- Information regarding the Texas Commission on Environmental Quality (TCEQ) Underground Injection Control Permits and Registrations can be found at https://www.tceq.texas.gov/permitting/waste_permits/uic_permits/uic.html.
- TCEQ's Oil & Gas Facilities: Compliance Resources webpage (<https://www.tceq.texas.gov/assistance/industry/oil-and-gas>) covers regulations on air, water, and waste related to the oil and gas industry in Texas.
- The U.S. Environmental Protection Agency (EPA) Protecting Underground Sources of Drinking Water from Underground Injection (UIC) website is <https://www.epa.gov/uic>.
- Drawings of the different UIC well types can be found on each of their individual webpages (Class I – VI) at https://www.epa.gov/uic/general-information-about-injection-wells#how_protect.
- The U.S. EPA SDWA website is <https://www.epa.gov/sdwa>
- The Ground Water Protection Council website providing information and links relating to wells, underground injection practices, and groundwater protection is <https://www.gwpc.org/>.
- The Texas Groundwater Protection Committee (TGPC) Oil, Gas, and Mining webpage (<https://tgpc.texas.gov/oil-gas-mining/>) has additional information and links on this subject.

Other Frequently Asked Questions (FAQs)

To find additional FAQs visit the Texas Groundwater Protection Committee's FAQ webpage at <https://tgpc.texas.gov/frequently-asked-questions-faqs>.