

# WHEN IS A SEPTIC SYSTEM REGULATED AS A CLASS V WELL?



**Audience:** This fact sheet is for state, tribal, and local regulators; health department officials; environmental quality officers; and other persons who design, track, inspect, or issue permits for septic systems.

**Purpose:** To help identify when a septic system would be regulated as a Class V well.

## DEFINITIONS

### SANITARY WASTE

Sanitary waste is liquid or solid waste originating solely from humans and human activities, such as waste 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 (40 CFR 144.3).

### INDUSTRIAL OR COMMERCIAL WASTE

For the purpose of this fact sheet, industrial or commercial waste can include, but is not limited to, any waste that results from manufacturing or other industrial and commercial processes.

### CLASS V WELLS

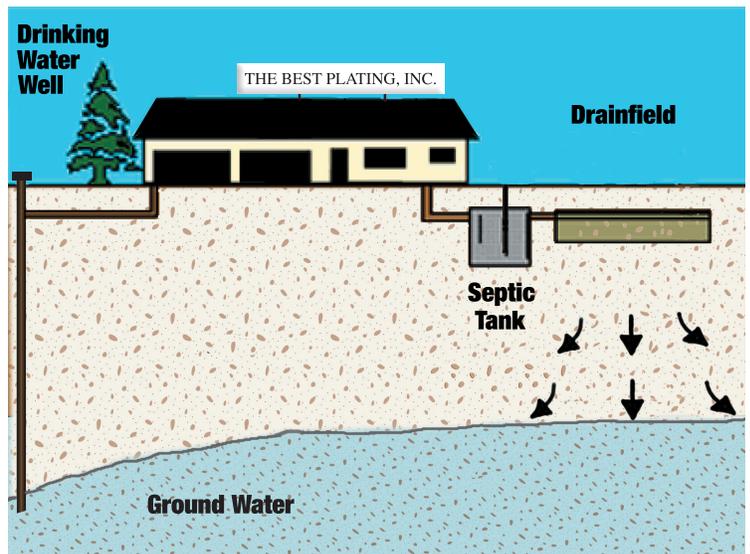
Class V wells are typically shallow “wells,” such as shallow disposal systems and dry wells, used to place a variety of fluids directly below the land surface (40 CFR 144.80 (e)).

### WELLS OR INJECTION WELLS

A well or injection well is a bored, drilled, or driven shaft, or dug hole, whose depth is greater than its largest surface dimension; an improved sinkhole; or a subsurface fluid distribution system used to discharge fluids underground (40 CFR 144.3).

## WHY IS EPA CONCERNED ABOUT SEPTIC SYSTEMS?

Septic systems are commonly found in rural and suburban areas where populations also rely on ground water for drinking water. Many septic systems are located in close proximity to private drinking water wells or public water systems that use ground water sources. When septic systems are properly sited, designed,



constructed, and operated, they pose a minimal threat to drinking water sources. Alternatively, poorly designed, maintained, and operated septic systems can contaminate ground water and surface water with nutrients, toxic chemicals, and pathogens.

Septic systems are designed solely to treat sanitary waste. The disposal of industrial or commercial waste into a septic system can seriously inhibit wastewater treatment and cause the system to fail. More important, chemicals can pass through the system, enter the ground water, and pose a serious contamination threat. This was the case at a shopping center in Virginia.

## **WHAT WENT WRONG?**

A contractor conducting routine sampling found high levels of two solvents, trichloroethylene (TCE) and perchloroethylene (PCE), in the septic system leach field of a shopping center in Virginia. Nearby private drinking water wells were also found to be contaminated. If consumed, TCE and PCE have the potential to cause liver damage and cancer in humans. As a result, homes and businesses affected by the contamination were forced to abandon their drinking water wells and switch to bottled water until they could be connected to a public water system. The source of contamination was linked to businesses inside the shopping center that improperly disposed of their commercial wastewater into the septic system. These businesses were, therefore, responsible for funding the costly cleanup, which could have been avoided if they had properly disposed of their commercial wastewater.



## **WHEN IS A SEPTIC SYSTEM REGULATED AS A CLASS V WELL?**

**E**PA is directed by the Safe Drinking Water Act (SDWA) to establish minimum federal requirements for state\* and Tribal Underground Injection Control (UIC) Programs to protect underground sources of drinking water from contamination caused by underground injection activities. Protection includes the oversight of construction, operation, and closure of injection wells. A septic system\*\* is required to meet UIC Program requirements and is considered a Class V well if either one of the following conditions is met:

- The septic system, regardless of size, receives any amount of industrial or commercial wastewater (also known as industrial waste disposal wells or motor vehicle waste disposal wells); or
- The septic system receives solely sanitary waste from multiple family residences or a non-residential establishment and has the capacity to serve 20 or more persons per day (also known as large-capacity septic systems).

## **WHAT ARE THE MINIMUM FEDERAL REQUIREMENTS FOR CLASS V WELLS?**

**O**wners or operators of industrial waste disposal wells and large-capacity septic systems must meet state\* and federal requirements. The minimum federal requirements for Class V wells are:

1. Obey the non-endangerment performance standard prohibiting injection that allows the movement of fluids containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation or adversely affect public health; and
2. Provide inventory information (including facility name and location, legal contact name and address, ownership information, nature and type of injection wells, and operating status of the injection wells) to the state or EPA regional UIC Program.

\* States may have additional or more stringent requirements.

\*\* Single family residential septic systems and non-residential septic systems that are used solely for sanitary waste and have the capacity to serve fewer than 20 persons a day are excluded from the UIC requirements (40 CFR 144.81(9)).

## WHAT ADDITIONAL REQUIREMENTS APPLY TO SEPTIC SYSTEMS THAT RECEIVE MOTOR VEHICLE WASTE?

In 1999, EPA published the Class V rule, which requires owners and operators of motor vehicle waste disposal (MVWD) wells to meet the following additional requirements:

- New MVWD wells are banned as of April 2000. Therefore, motor vehicle maintenance and repair facilities can no longer construct or install wastewater disposal devices that allow service wastewater to enter sinks and floor drains connected to septic systems.
- Existing wells in regulated areas are banned and are required to be closed by January 2007. States and EPA regions may allow some facilities to continue operating their wells under a UIC permit or, in limited cases, to convert them to another type of well. Contact the appropriate EPA regional or state UIC Program to determine what areas are regulated in your state.

### **MOTOR VEHICLE WASTE DISPOSAL WELLS**

Shallow waste disposal systems that receive or have received fluids from vehicle repair or maintenance activities, such as auto body or automotive repair, car dealerships, or other vehicular repair work, are required to meet additional protective requirements.



## WHERE MIGHT YOU FIND A SEPTIC SYSTEM OPERATING AS A CLASS V WELL?

Facilities whose septic systems may receive industrial or commercial wastes include:

- Electroplating Shops
- Dry Cleaning Operations
- Photo Processing Operations
- Mortuaries
- Taxidermy Shops
- Food Processing Operations
- Beauty Salons
- Print Shops
- Car Washes

## WHAT CAN YOU, AS A LOCAL OFFICIAL, DO IF YOU FIND A SEPTIC SYSTEM OPERATING AS A CLASS V WELL?

If you have, or think you may have, identified a septic system that receives industrial or commercial waste, you should contact the appropriate EPA regional or state UIC Program. UIC officials can offer advice and assistance with your concerns. A list of UIC Program contacts is available at [www.epa.gov/safewater/uic/states.html](http://www.epa.gov/safewater/uic/states.html).



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## WHEN IS A SEPTIC SYSTEM REGULATED AS A CLASS V INJECTION WELL?

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### FOR MORE INFORMATION...

#### UIC and Class V Wells

What is the UIC Program? Web site:  
[www.epa.gov/safewater/uic/whatis.html](http://www.epa.gov/safewater/uic/whatis.html)

Shallow Injection Wells (Class V) Web site:  
[www.epa.gov/safewater/uic/classv.html](http://www.epa.gov/safewater/uic/classv.html)

General Information:  
SDWA Hotline: 1-800-426-4791

UIC Program Contact Web site:  
[www.epa.gov/safewater/uic/states.html](http://www.epa.gov/safewater/uic/states.html)

EPA's Onsite/Decentralized Wastewater Treatment  
Systems Web site:  
[www.epa.gov/owm/mtb/decent/](http://www.epa.gov/owm/mtb/decent/)

#### Office of Ground Water and Drinking Water (4606M)

EPA 816-F-03-002  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

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