

Guidance on EPA Underground Injection Control (UIC) Requirements for Class V Wells

NPS Commercial Services

March 13, 2018

Introduction and Background

This guidance is intended for concessioners within the National Park Service (NPS) who have, as part of their assigned property, facilities that may be classified as underground injection wells by the U.S. Environmental Protection Agency (EPA). Its main purpose is to assist concessioner staff with determining the applicability of EPA underground injection control (UIC) regulations, found at 40 CFR 144, to NPS facilities assigned to concessioner operations, and to provide guidance on the steps that concessioner staff must follow to determine and carry out their responsibilities for such facilities.

In 1974, Congress passed the Safe Drinking Water Act (SDWA) to regulate the nation's public drinking water supply, and amendments made in 1986 and 1996 required further actions to protect drinking water at its sources, including rivers, lakes, reservoirs, springs, and groundwater wells. The contamination of groundwater is difficult to correct; therefore, it is important that concessioner staff understand and follow the regulations and requirements in place to protect our drinking water and prevent groundwater contamination. Part C of the SDWA focuses on the protection of groundwater and authorizes states to establish underground injection control programs to protect underground sources of drinking water.

An injection well is simply a well into which fluids are injected. As defined in the UIC regulations, a well includes all of the following:

- 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.
- A subsurface fluid distribution system.

Injection wells are categorized into six groups, or classes, identified as Classes I through VI. Five of these classes, Class I – IV and Class VI wells are similar in function, construction, and operating features allowing for consistent technical requirements. Class V wells are wells that do not meet the description of any other well class and includes domestic septic systems, making Class V wells the most common class of injection well. Based on EPA injection well inventory data for fiscal year (FY) 2016¹, Class V wells comprise approximately 70% (498,190) of all underground injection wells (708,051) throughout the country.

Class V wells are used to inject non-hazardous fluids underground, either above or within underground sources of drinking water (aquifers). Most Class V wells are used to dispose of wastes such as sanitary wastes, stormwater, cooling wastewater, or floor drain discharges from vehicle maintenance shops or carwashes. Because Class V wells release fluids around underground sources of drinking water and are so numerous, significant threats to drinking water can occur if they are not properly managed.

The two federal UIC program requirements are to:

- Submit basic information about Class V injection well(s) to EPA or the designated state agency.
- Construct, operate, and close Class V injection wells in a manner that protects underground sources of drinking water.

Typically, Class V wells are “authorized by rule” meaning, as long as required and sufficient information has been submitted to the regulatory authority, a permit is not required (with a few exceptions, should operations fall into a particular circumstance – see [40 CFR 144.84](#)). It is possible that the US EPA or EPA's designated state

¹ Source: EPA Underground Injection Control, [Underground Injection Well Inventory](#) web page, “FY 2016 Underground Injection Well – By State,” data accessed February 28, 2018.

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agency having authority – referred to as “primacy” – may ask for additional information or require a permit to ensure that groundwater quality is adequately protected.

Terms and Definitions

What is a Class V well?

A Class V well is a system used to inject non-hazardous fluids underground, into or above an underground source of drinking water. These systems can range from simple shallow wells to complex experimental injection wells. Most simple Class V wells depend on gravity to drain fluids below the surface and provide little or no pretreatment before injecting fluids in or above groundwater. More complex Class V wells use pressure systems for fluid injection.

What are the different types of Class V wells?

There are many types of Class V wells, but the most common for concessioners are large capacity septic systems. Many other types of Class V wells discharge wastewater one way or another. Examples include:

- Septic system wells².
- Air conditioning return flow wells.
- Cooling water return flow wells.
- Drainage wells.
- Dry wells.
- Recharge wells.
- Salt water intrusion barrier wells.
- Sand backfill and other backfill wells.
- Injection wells associated with the recovery of geothermal energy for heating, aquaculture, and production of electric power.
- Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts.
- Motor vehicle waste disposal wells.
- Stormwater infiltration systems.

Requirements

How can concessioners determine if they are responsible for meeting compliance requirements for Class V wells?

Concessioners can refer to their concession contract to determine whether they are responsible for maintaining any Class V well system used by concession operations. As specified in their contract, concessioners must follow and adhere to all applicable EPA and other regulations, including those pertaining to Class V wells.

If their concession contract indicates that the concessioner is responsible for maintaining assigned facilities that are Class V wells, the concessioner must first contact the park concession specialist to determine if the NPS or the prior contract holder may have already taken steps with the regulatory authority to register or permit the Class V well as required. The concessioner can then proceed at the direction of, and with involvement of, the park concession specialist.

² UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day. UIC requirements do apply to certain community septic systems such as those located at NPS campgrounds and building complexes.

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If their concession contract indicates that the concessioner is not responsible for maintaining assigned facilities that are Class V wells, then NPS will take the lead on compliance with Class V well requirements. The concessioner must still contact and consult with the park concession specialist to determine what NPS requirements and discharge limitations are applicable to the concessioner's use of the wastewater system.

If their concession contract is unclear about whether the concessioner has responsibility for maintaining assigned facilities that are Class V wells, then the concessioner should consult with the park concession specialist to confirm that they are not responsible for Class V well requirements and that NPS is aware of the existence of Class V well system so that NPS can make sure it is in compliance.

What EPA requirements are applicable to Class V wells?

UIC program requirements were developed by the EPA and designed to be adopted by states, territories, and tribes. States, territories, and tribes must develop a program that is as stringent as the federal program and can show that their regulations contain effective minimum requirements. Once the state UIC program is submitted to and approved by EPA, the state then has primary enforcement responsibility, or primacy. See the [EPA Webpage: Primary Enforcement Authority for the UIC Program](#) to determine whether the state or EPA has primacy for concessioner operations. In general, the state program must implement the following requirements for authorized Class V well registration:

1. Submit inventory information to the permitting authority and verify authorization to inject. The permitting authority will review the information to be sure that the well will not endanger an underground source of drinking water.
2. Operate the well in a way that does not endanger an underground source of drinking water. The permitting authority will explain any specific requirements.
3. Properly close the Class V well when it is no longer being used. The well should be closed in a way that prevents movement of any contaminated fluids into any underground source of drinking water.

What additional EPA requirements exist for various types of Class V wells?

Additional requirements for motor vehicle waste disposal wells were introduced by the EPA in 1999. The park concession specialist should be notified if a motor vehicle well is discovered. Specifically, for any remaining motor vehicle waste disposal wells:

- New wells are prohibited nationwide as of April 2000.
- Existing wells in regulated areas will be phased out, but owners and operators can seek a waiver and obtain a permit. Permits must set out minimum requirements including:
 - Meeting Maximum Contaminant Levels (MCLs) and other health based standards at the point of injection.
 - Monitoring of the injected liquid and sludge.
 - Implementing best management practices, such as recycling and waste minimization.
- Owners or operators of certain types of Class V wells must notify EPA 30 days prior to closing their well using the EPA form provided ([EPA Form: UIC Reporting Forms](#)).

Additional requirements are based on individual state level programs.

What types of state requirements may be applicable to Class V wells?

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If the state has primacy, at a minimum, the owner or operator must report inventory information to the state. Some states require an operating permit in addition to inventory information. In most cases, this will require additional information to be reported as well as a permitting fee.

Do requirements differ for new vs. existing wells?

Generally speaking, there is not much difference between new and existing well requirements. However, you will need to check with your permitting authority to determine any possible requirement variations. Some states require permitting of any new Class V wells.

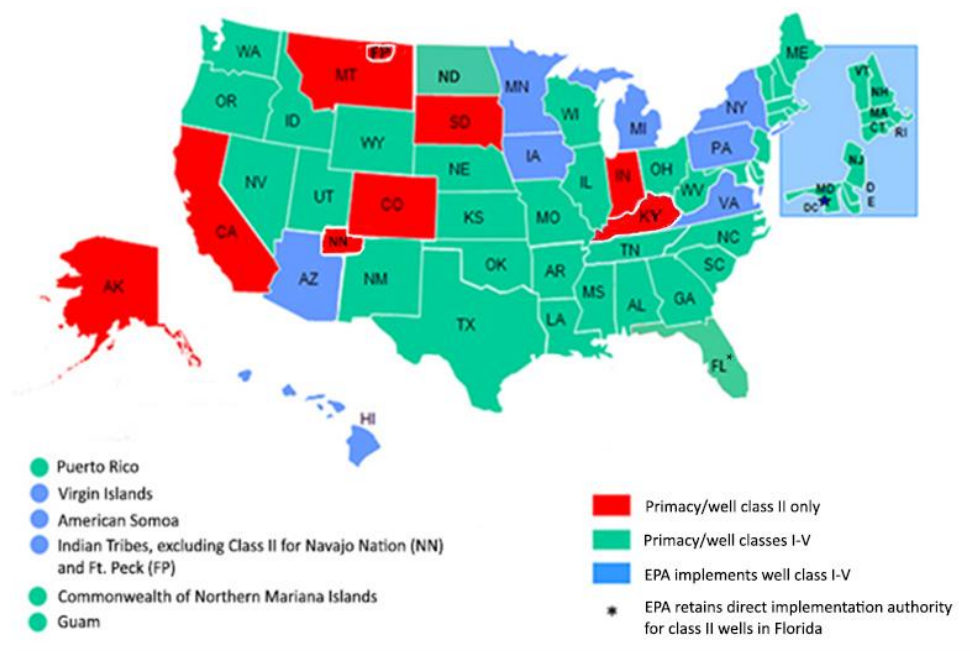
How to Register

How can I determine if I have Class V wells in my concessioner operations?

NPS Commercial Services environmental auditors are tasked with identifying Class V wells in the course of conducting environmental compliance audits of concessioner operations, so the most recent environmental audit report may contain pertinent information. If you are still not certain whether a new or existing septic system, stormwater infiltration system, or other wastewater disposal system that is part of concessioner operations is a Class V well as defined by EPA and associated state regulations, contact your park concession specialist or Greenline for assistance at 303-987-6820 or NPS_GreenLine@nps.gov. Any prohibited or banned well that concessioners discover must be reported to the park concession specialist so that it can be properly and expeditiously closed.

How do I determine if I need to register a concessioner-operated Class V well with EPA or the state?

The map below indicates where EPA has given primacy to specific states to implement the regulations for Class V wells. If the map indicates that your state has its own state program, or that the state and EPA share the UIC program, then you also need to refer to the state's regulations and requirements for Class V wells.



Source: <http://water.epa.gov/type/groundwater/uic/Primacy.cfm>

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How do I register a Class V well with EPA?

If the concessioner is responsible for compliance with EPA Underground Injection Control operations and EPA has primacy in your state, complete the appropriate forms located on [EPA's website](#) and submit accordingly with any required paperwork. Usually, to submit inventory information about a Class V well, the appropriate form is EPA Form 7520-16, "Owner or Operator Form for Inventory of Injection Wells." Maintain documentation of submittals to any regulatory agency on file as part of concessioner environmental management records. Remember to provide copies of any documentation, including a copy of Form 7520-26 or any other EPA form submitted, to the park concession specialist.

Where can I find information on how to register a Class V well with the state, if required?

Review the underground injection control requirements on the state regulatory agency website to obtain details on individual state requirements. Note that some states have additional requirements for Class V wells, and some require permits to operate them. Before contacting the state regulatory agency, consult with the park concession specialist and keep them informed of all communications with the regulatory agency. Maintain copies of any correspondence or documents, including the permit application and the permit itself, once issued by the state. Also, provide copies of all records to the park concessions specialist, including all emails and correspondence with representatives of the state regulatory agency.

Additional Web Resources

[EPA Webpage: General Information about Underground Injection Wells](#)

[EPA Webpage: Classes of Underground Injection Wells](#)

[EPA Webpage: Class V Wells](#)

[EPA Webpage: Federal Requirements for Class V Wells](#)

[EPA Webpage: Primary Enforcement Authority for the UIC Program](#)

[EPA Form: UIC Reporting Forms](#)