



CLASS V UIC STUDY FACT SHEET *SALT WATER INTRUSION BARRIER WELLS*

What is a salt water intrusion barrier well?

Salt water intrusion barrier wells are Class V underground injection control (UIC) wells used to inject water into a fresh water aquifer to prevent the intrusion of salt water. These wells may have secondary purposes, such as to recharge an aquifer with fresh water to be used later or to control land subsidence (reduce ground movement).

What types of fluids are injected into salt water intrusion barrier wells?

Waters of varying qualities are injected to create salt water intrusion barriers, including untreated surface water, treated drinking water, and mixtures of treated municipal wastewater and ground or surface water.

Do injectate constituents exceed drinking water standards at the point of injection?

Available data show that the injectate typically meets primary and secondary drinking water standards and health advisory levels at the point of injection.

What are the characteristics of the injection zone of salt water intrusion barrier wells?

Salt water intrusion barrier wells are drilled to various depths depending on the depth of the aquifer being protected. They inject into fresh ground water aquifers used as drinking water supplies that are in hydraulic connection with an extensive salt water body, such as a sea, a salt lake, or an ocean.

Are there any contamination incidents associated with salt water intrusion barrier wells?

No contamination incidents associated with the operation of salt water intrusion barrier wells have been reported.

Are salt water intrusion barrier wells vulnerable to spills or illicit discharges?

Because protection of drinking water supplies is the major goal of a salt water intrusion barrier well and the injectate typically meets drinking water standards, salt water intrusion barrier wells are unlikely to receive spills or illicit discharges of potentially harmful substances.

How many salt water intrusion barrier wells exist in the United States?

There are 315 salt water intrusion barrier wells documented in the United States. The number of salt water intrusion barrier wells in the nation is estimated to be greater than 609, but unlikely to be higher than 700.

Where are salt water intrusion barrier wells located within the United States?

All documented salt water intrusion barrier wells are located in CA (308), FL (1), and WA (6). In addition, as many as 200 salt water intrusion barrier wells are believed to exist in NY. There also may be some wells in NJ; however, the exact number of such wells in this state is unknown.

How are salt water intrusion barrier wells regulated in states with the largest number of this type of well?

Permit by rule: CA

Individual permit: FL, NY, and WA

Where can I obtain additional information on salt water intrusion barrier wells?

For general information, contact the Safe Drinking Water Hotline, toll-free 800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Standard Time. For technical inquiries, contact Amber Moreen, Underground Injection Control Program, Office of Ground Water and Drinking Water (mail code 4606), EPA, 401 M Street, SW, Washington, D.C., 20460. Phone: 202-260-4891. E-mail: moreen.amber@epa.gov. The complete Class V UIC Study (EPA/816-R-99-014, September 1999), which includes a volume addressing salt water intrusion barrier wells (Volume 20), can be found at <http://www.epa.gov/OGWDW/uic/cl5study.html>.
