



The stringency of the current system that grants aquifer exemptions under the Underground Injection Control (UIC) program is effective. The existing salinity threshold used by states and the Environmental Protection Agency (EPA) protects current and future drinking water sources, and does not need to be modified. In fact, raising the salinity threshold could lead to unintended economic and environmental consequences for communities and businesses across the country.

The current regulatory programs for aquifer exemptions are working effectively to protect groundwater as a current and future drinking water source.

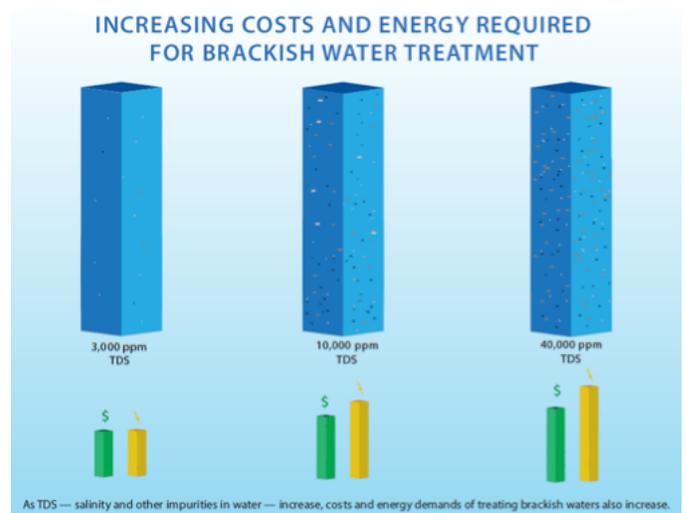
- According to the U.S. Environmental Protection Agency (EPA) Code of Federal Regulations (CFR), an aquifer is “a geological formation, group of formations or part of a formation that is capable of yielding a significant amount of water to a well or spring.” Only some aquifers are suitable sources of drinking water. Aquifers not suitable have characteristics such as high salinity or naturally commingled hydrocarbons and/or minerals which make them impractical to use as drinking water.
- The Safe Drinking Water Act (SDWA) protects underground sources of drinking water. Underground sources of drinking water are specifically defined as an aquifer which i) supplies any public water system; ii) contains sufficient groundwater to supply a public water system AND either currently supplies drinking water for humans OR contains fewer than 10,000 mg/L total dissolved solids (TDS); and iii) is not an exempted aquifer. (See 40 CFR § 144.3.)
- An aquifer exemption is a regulatory designation available only if an aquifer is neither a current nor a likely future source of drinking water. (See 40 CFR § 146.4.)
- Aquifer exemptions are granted only after a stringent application, review, and approval process. States or companies wishing to obtain an aquifer exemption must submit detailed proof that the criteria for an aquifer exemption have been met. These applications involve compiling extensive information about the suitability of the aquifer, the adequacy of alternative water supplies, and the unlikelihood of the future use of the aquifer. These applications are reviewed at the federal and/or state level or tribal levels (depending on primacy) and then sent to EPA (where a final determination is made).
- Once an aquifer exemption has been approved, the UIC program permits industries to inject wastewater in those exempted aquifers.

Existing salinity criteria is sufficiently protective for current and future water needs.

- Current and future drinking water resources are adequately protected by the current regulatory definition of underground source of drinking water.
- Raising the salinity criteria for an aquifer exemption is impractical because abundant quantities of slightly saline groundwater exist. It is also impractical because treating heavily saline groundwater would require significant energy, is costly, and creates large-scale waste disposal issues. For these reasons, state groundwater management plans rely on slightly saline groundwater rather than heavily saline water.

Modifying the criteria for aquifer exemptions could have significant unintended economic and environmental consequences for communities and businesses.

- The UIC program includes six separate categories of injection used by a wide variety of industries and municipalities. The purposes of these wells include domestic energy recovery (formation stimulation), and more traditional liquid waste disposal (for traditional industries, as well as desalination facilities).



Source: GSI, A Technical Assessment of Protection of Underground Sources of Drinking Water under the UIC Rule and Aquifer Exemption Program (2017).