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New USGS report shows public supply well vulnerabilities

The U.S. Geological Survey released the results of a study designed to identify factors that affect the vulnerability of public water supply wells to contamination. More than one-third of the U.S. population gets its drinking water from these wells, and the study was done in response to evidence indicating low concentrations of contaminants in groundwater in many parts of the nation.

The report looks at water wells in ten regions across the U.S., four of which are highlighted in a video overview of the results. The study found that the source of a well's recharge water, the geochemical conditions encountered by groundwater traveling to a well, and the age of the groundwater accessed by a well are important indicators of a well's potential for contamination. The study also noted that water in some regions has preferential flow pathways – such as sinkholes in karst systems – which enable it to move quickly from the land surface to a well, decreasing the time available for contaminants to be degraded.

The study was done as part of the USGS National Water-Quality Assessment Program, which provides nationwide information on water quality conditions, how those conditions change over time, and how they are affected by natural processes and human activities.

The full report can be accessed on the USGS website.