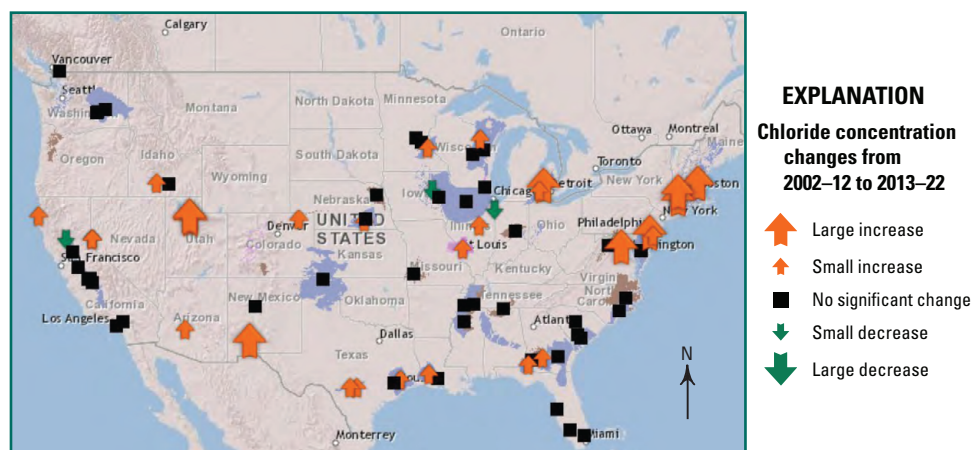


The U.S. Geological Survey National Water Quality Network—Groundwater, 2024

The U.S. Geological Survey (USGS) operates a National Water Quality Network (NWQN) to monitor trends in groundwater quality and assess emerging contaminants of concern. It is a “network of networks” with 81 subnetworks being sampled on a decadal time scale. Each year, 8 of the subnetworks are sampled. Subnetworks have 20–30 wells each and include studies of domestic supply wells or shallow groundwater (20–50 feet deep) underlying urban land use or agricultural land use. Currently there are 2,089 wells in the network. All wells are sampled for physical properties, nutrients, major ions, trace elements, per- and polyfluoroalkyl substances (PFAS), and a subset of wells are sampled for pesticides, volatile organic compounds, radionuclides, and microbiological contaminants.

Sampling of an observation well in Pennsylvania. Photograph by Natalie Schmer, USGS.

The USGS NWQN includes thousands of locations where USGS staff collect groundwater quality samples from wells (such as those shown in picture above) in order to evaluate trends in groundwater quality across the Nation. Trends are calculated for 16 constituents including nitrate, radium, and several major ions and trace elements.



Decadal scale changes in groundwater quality calculated from NWQN data. Map links to decadal mapper website. Figure taken from Lindsey, B.D., Johnson, T.D., Privette, L.M., and Estes, N.J., 2018, Decadal changes in groundwater quality: U.S. Geological Survey web page, <https://nawqatrends.wim.usgs.gov/Decadal/>.

852

Wells in 33 subnetworks at the depth zone used for domestic supply

744

Wells in 29 subnetworks of shallow groundwater underlying agricultural land use

493

Wells in 19 subnetworks representing shallow groundwater underlying urban land use

For more information about the U.S. Geological Survey Water Monitoring Networks:

Visit <https://www.usgs.gov/mission-areas/water-resources/science/national-water-monitoring-network>

Contact the National Water Quality Network Coordinator at waternetworks@usgs.gov

[This product updates data within the same text from General Information Product 247]