

GROUNDWATER-LEVEL MONITORING NETWORK

Monitoring groundwater levels can be used for:

- understanding local water resources;
- assessing aquifers in drought or wet conditions;
- assessing groundwater divides and surface water impacts;
- calibrating groundwater flow models and other decision-support tools; and
- helping to determine the relationship between water resources and withdrawals.

Groundwater level monitoring

The DNR and its partners at the [United States Geological Survey \(USGS\)](#) and the Wisconsin Geological and Natural History collectively operate and maintain a statewide network of monitoring wells that provide necessary long-term data for Wisconsin's statewide water resources inventory. The groundwater monitoring network, started in 1946, now consists of over 90 long-term monitoring wells that measure groundwater levels in aquifers across the state. Groundwater level monitoring wells are located in 47 of Wisconsin's 72 counties.

The [DNR's water quantity data viewer](#) shows the location and water levels associated with the statewide groundwater monitoring network.

In FY 2018, due to increasing reliance on network data to meet its Water Use program needs, DNR expanded its funding and management support of the groundwater level monitoring network. On a day-to-day basis USGS and WGNHS continue to support the evaluation and maintenance of the monitoring network, aid in data collection, interpretation, and provide information to public and private clients through dedicated webpages. WGNHS provides a general overview of the monitoring network at <https://wgnhs.uwex.edu/water-environment/groundwater-monitoring-network>, and USGS maintains an interactive portal for viewing and downloading data at <https://waterdata.usgs.gov/wi/nwis/gw>.

In FY 2023, DNR committed \$100,000 to the Wisconsin Groundwater Monitoring Network and provided additional funding of \$75,950 to USGS to conduct additional monitoring on 5 stream gages, 1 lake gage, and 20 short-term project wells in central and northern Wisconsin. WGNHS received grants the USGS National Ground-Water Monitoring Network (NGWMN) program in FY 2021 and FY 2023 for \$271,848 and \$177,899 respectively. Once the work on both grants is completed, these two recent grants, together with FY2017 and FY2019 NGWMN grant, will result in repairs to 33 wells, twelve well replacements, seven new wells, and equipment upgrades to 17 wells. These improvements add three new counties to the Network (Barron, Buffalo, and St. Croix).

In 2022 the DNR released a StoryMap illustrating the collaboration between DNR, WGNHS, USGS, UW System and others to collect water quantity data to support our understanding on groundwater levels and interaction between surface water and groundwater. Visit <https://storymaps.arcgis.com/stories/03c2609bb8bd470fabe2f4a83788f74d> to learn more.