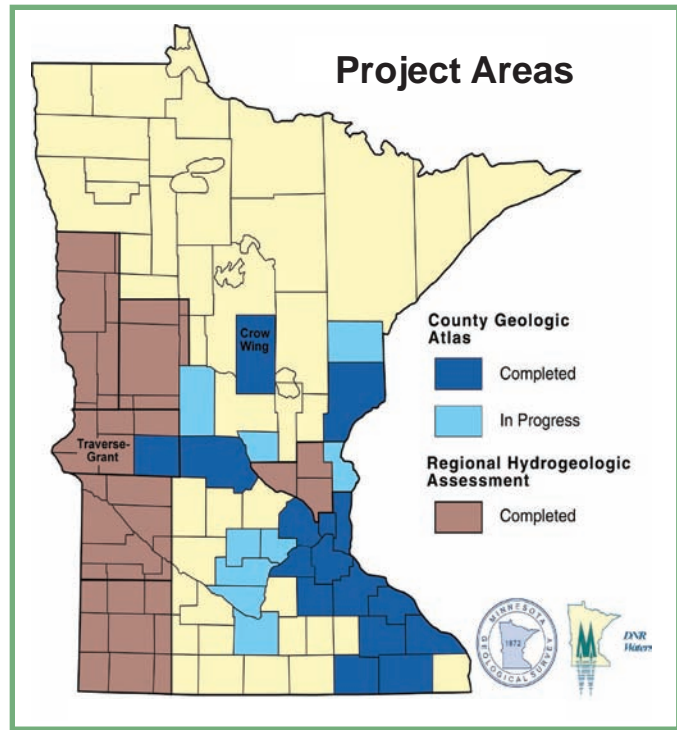


County Geologic Atlas and Regional Hydrogeologic Assessment Program

Ground Water Data

DNR Waters and the Minnesota Geological Survey (MGS) collaborate preparing the maps and reports of the County Geologic Atlases and Regional Hydrogeologic Assessments. The atlases and assessments provide data on Minnesota's geology and aquifers. The MGS provides geologic data collection, mapping, and interpretation of the rock and sediment beneath the earth's surface. DNR Waters uses the geologic framework for ground water studies of how water moves through those materials and interacts with water at the land's surface. DNR Waters staff measure water levels in wells and collect water samples for chemical and isotopic analysis. They also use ground water level monitoring data, climatology records, water use permits, and geophysical study reports. County-scale atlases and multi-county assessments are used in planning, environmental protection, and education. A better understanding of the physical environment ground water systems enables better environmental decision-making and resource management.



Recent Projects

The Crow Wing County Geologic Atlas, Part B, published in late 2007, covered an area in Minnesota known for its many high-quality lakes that are both intensively used for recreation and under pressure from development. The Part B report included examples of how water levels change over time in different lakes. These changes depend on geologic setting, watershed size, and amount of surface- and ground-water inflow and outflow. The report also looked at a location that illustrated the complex interaction of ground water and surface water.

The Traverse-Grant Regional Hydrogeologic Assessment, Part B, published in the fall of 2008, provided maps of five buried aquifers in glacial sediment that are vital for water supply. The extent of the aquifers had not previously been described well in that part of the state. The report shows that these buried aquifers are more localized and limited than the better-known thick, extensive bedrock aquifers in the southeast part of the state. In places, buried aquifers may be interconnected with others above or below it, so that the effect of pumping in one aquifer is observed in others.

Data Available Online

Digital data for many atlases and assessments, including geographic information systems (GIS) and related resource data, can be downloaded over the Internet. Most map images and documents are available as portable document format (PDF) files. Digital data for many reports can be downloaded for use in GIS programs such as ArcView, ArcGIS, and EPPL7. Map viewers (at no or low cost) such as ArcExplorer can also be used to visualize the downloaded data.

Other county atlas and assessment report data, including MGS report data, can be accessed through the DNR Waters website ([status map](#)).

For more information on MGS atlas and assessment report data see the list of [current publications on the MGS website](#).

