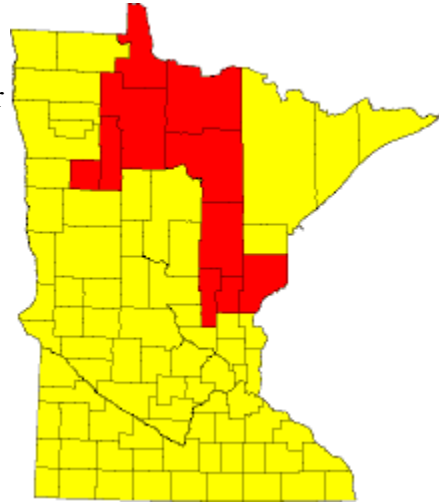




Ground Water Profile: **North Woods Region**

This is a ground-water profile for Minnesota's North Woods Region, which is comprised of Aitkin, Beltrami, Clearwater, Itasca, Kanabec, Koochiching, Lake of the Woods, Mahnommen, Mille Lacs and Pine Counties.



HYDROGEOLOGY:

- This region is dominated by shallow glacial aquifers with numerous connections to wetlands.
- Availability of ground water varies because low-yielding crystalline bedrock is present near the surface in many areas.

QUALITY ISSUES:

- Septic tanks and nitrate contamination can be a problem locally, including seasonal and permanent lakeshore residences.
- The presence and level of "natural contaminants" (trace metals) should be better defined to determine long-term health impacts.
- Potential for minerals development should be assessed and potential exploration areas defined.

INFORMATION NEEDED:

- Compile existing information to determine what additional monitoring or mapping may be needed.

DESIRED ACTIONS:

- Ground water, lake, and wetland interactions should be determined in more densely populated areas and where the potential for mineral exploration is the greatest.
- Existing water chemistry data should be compiled to better identify areas of water-quality degradation.
- Sole-source aquifer designation should be investigated for

population centers.

- A water-level network should be established to help determine potential impacts of mineral development.