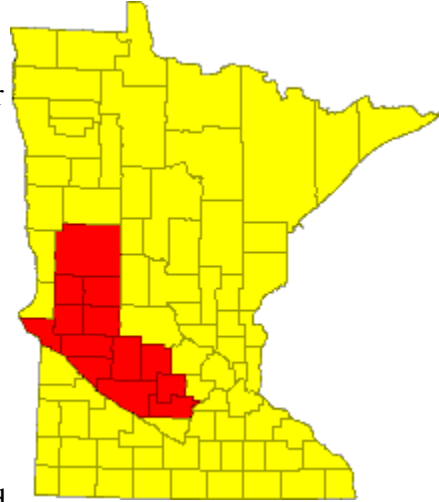


## Ground Water Profile: **West Central Region**

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This is a ground-water profile for Minnesota's West Central Region, which is comprised of Becker, Big Stone, Chippewa, Douglas, Grant, Kandiyohi, McLeod, Meeker, Otter Tail, Pope, Renville, Sibley, Stevens, Swift and Traverse Counties.



### **HYDROGEOLOGY:**

- High-yield, surficial, sand aquifers are present in large parts of this area.
- Deeper glacial aquifers are limited in areal extent.
- Bedrock does not yield large amounts of ground water in this region.

### **QUANTITY ISSUES:**

- Some well interference problems exist. There is adequate observation-well density.
- Where present, surficial sands are susceptible to contamination.

### **QUALITY ISSUES:**

- Arsenic and other elevated trace metals are associated with the geology of the region.
- Agricultural practices and domestic land uses may impact ground-water quality with the increased presence of nitrates and dissolved solids.
- Lakeshore development may adversely impact ground and surface water in the northern part of this region.

### **INFORMATION NEEDED:**

- The relationships between the water table and deep aquifers and the relationship between recharge rates to deeper aquifers need to be better defined.
- The impact of agricultural activities (feedlots, possible expansion of irrigation systems) should be addressed.

- There is a need to better delineate confining units and extent-buried aquifers.
- Sources of naturally occurring arsenic need to be defined.

**DESIRED ACTIONS:**

- Implement a long-term, systematic evaluation of the ground-water resources of this region.
- Trends monitoring of nitrates, pesticides, and urban impacts of water table aquifers is needed.
- Designate areas where nitrate levels in unconfined aquifers exceed drinking water standards.