Minnesota Department of Natural Resources
County Atlas Program
mndnr.gov/groundwatermapping

Water Chemistry

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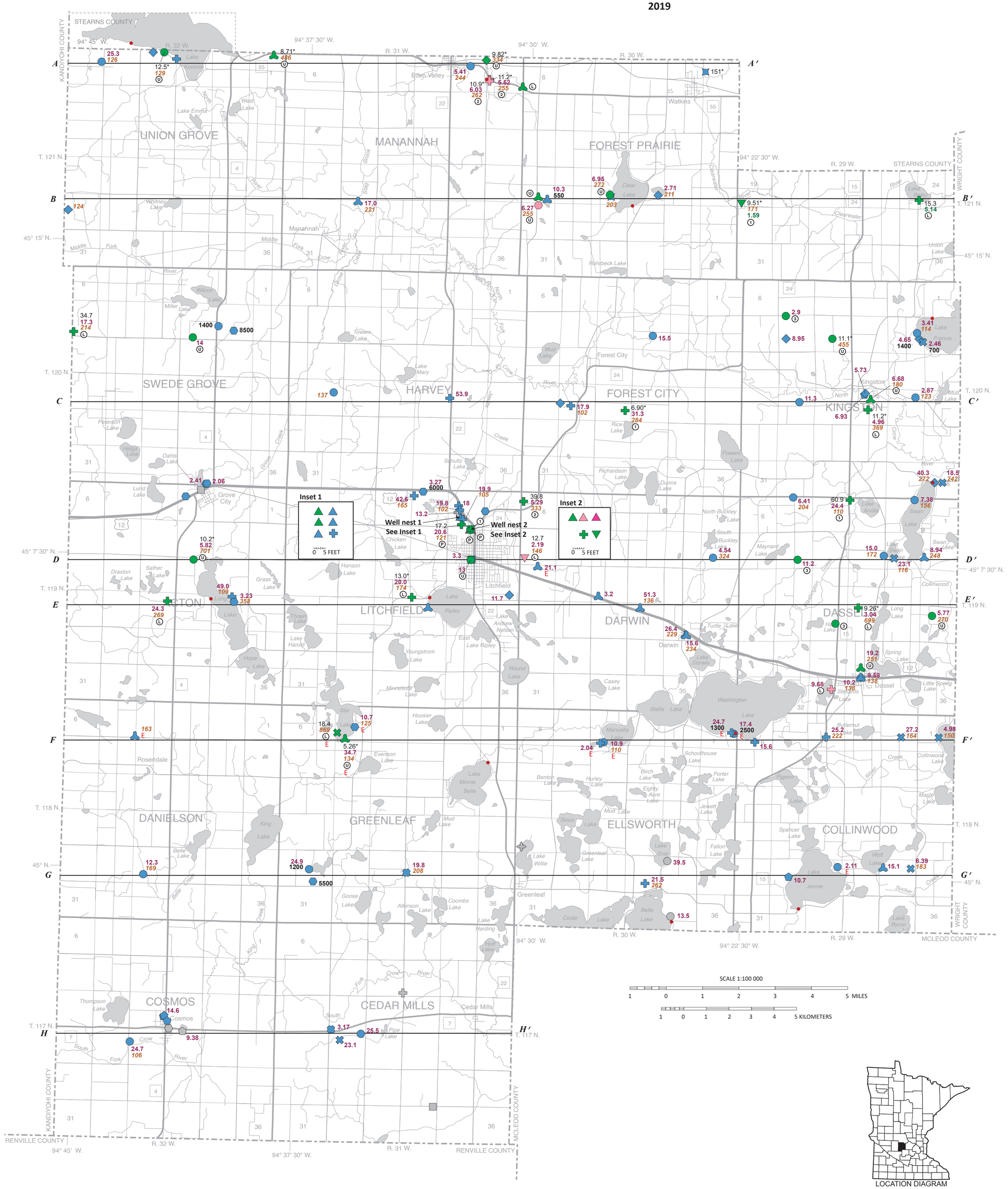
2019

Groundwater Atlas of Meeker County
County Atlas Series C-35, Part B
Plate 6 of 8
Water Chemistry

To accompany atlas Report, Plate 7, and Plate 8.



MAP EXPLANATION

Water sample, aquifer, and aquitard symbols

Symbol color indicates tritium age of water sample.
See Figure 5 in the report for geologic unit correlation.

Buried aquifers and aquitards

- ss
- nt*
- ms
- hs
- scs
- mls
- gs3
- gs4
- gs5
- wrs
- wes
- unknown

Bedrock

- Dakota (Kd)

*aquitard

Tritium age

Symbol color indicates tritium age of water sample.

- Cold War era: water entered the ground during the peak period of atmospheric tritium concentration from nuclear bomb testing, 1958–1959 and 1961–1972 (greater than 15 tritium units [TU]).
- Recent: water entered the ground since about 1953 (8 to 15 TU).
- Mixed: water is a mixture of recent and vintage (greater than 1 TU to less than 8 TU).
- Vintage: water entered the ground before 1953 (less than or equal to 1 TU).
- Not sampled for tritium.

Symbols and labels

- 12.5* Chloride: if shown, concentration is ≥5 ppm. (* naturally elevated)
- 11.3 Arsenic: if shown, concentration is ≥2 ppb.
- 284 Manganese: if shown, concentration is ≥100 ppb.
- 5.14 Nitrate: if shown, concentration is ≥1 ppm.
- 2500 Carbon-14 (^{14}C): estimated groundwater residence time in years.
- Surface-water sample
- E Groundwater sample with evaporative signature
- A—A′ Line of cross section (Part B)
- Body of water

Groundwater conditions

- ① Water from the surface moves through a thin layer of overlying fine-grained material to an underlying aquifer.
- ② Groundwater moves from an overlying surficial aquifer to a buried aquifer.
- ③ Groundwater moves from an overlying buried aquifer to an underlying buried aquifer.
- (L) Groundwater flows laterally.
- (P) Tritium concentrations may be artificially elevated by high capacity pumping.
- (U) Groundwater flowpath is unknown.

This map was compiled and generated in a geographic information system. Digital data products are available on the DNR County Atlas Program page (mndnr.gov/groundwatermapping).

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Base modified from Minnesota Geological Survey, Meeker County Geologic Atlas, Part A, 2015.

Universal Transverse Mercator projection, zone 15N, North American Datum of 1983. North American Vertical Datum of 1988.

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**Prepared and published with the support of
the Minnesota Environment and Natural Resources Trust Fund and the Clean Water, Land and Legacy Amendment**