

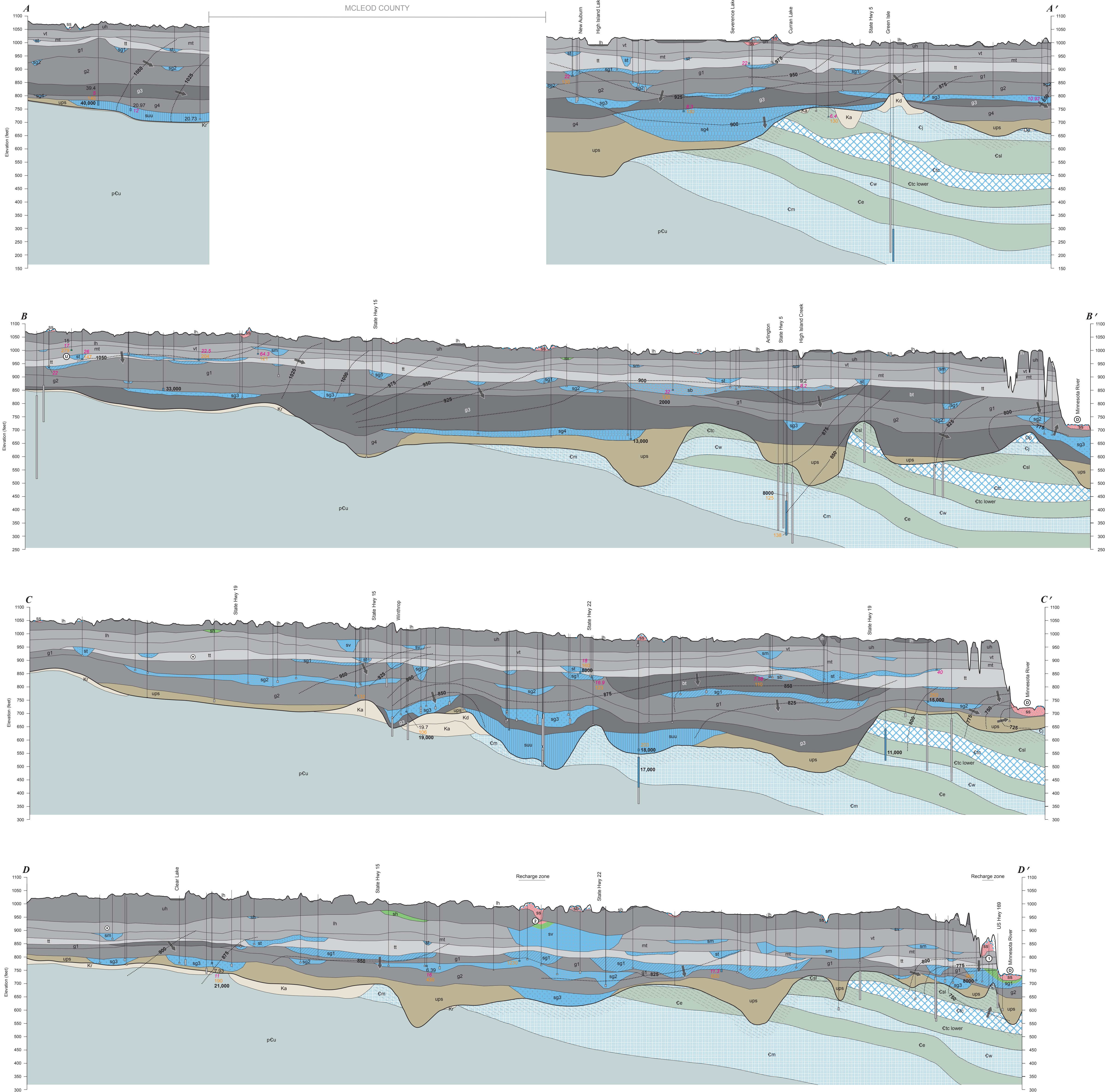
Hydrogeologic Cross Sections

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Reference report section: Hydrogeologic cross sections, pages 24–27.

MCLEOD COUNTY



CROSS SECTION EXPLANATION

Aquifers and aquitards grouped by stratigraphy

Interpreted tritium age is indicated by background color

Quaternary unconsolidated sediment (see Figure 4 for geologic unit correlation)

Surficial sand and gravel

Buried aquifers and aquitards

- uh
- sh/vs
- lh/vt
- mt
- sm
- st
- tt
- sb
- bt
- sg1
- g1
- sg2
- g2
- sg3
- g3
- g4
- suu
- ups

- Kd
- Ka
- Kr
- Qp
- Cj
- Csl
- Cic
- Cw
- Ce
- Cm
- pCu

Enhanced-permeability zone

Quaternary aquitards

Grouped by texture ranging from highest to lowest sand content indicating relative hydraulic conductivity

- tt
- lh, mt, vt
- g1, g2, g4, uh
- bt, g3, lh

- >50% and ≤60%
- >40% and ≤50%
- >30% and ≤40%
- ≤30%

Tritium age

Darker color in small vertical rectangle (well screen symbol) indicates tritium age of water sampled in well. Lighter color indicates interpreted age of water in aquifer.

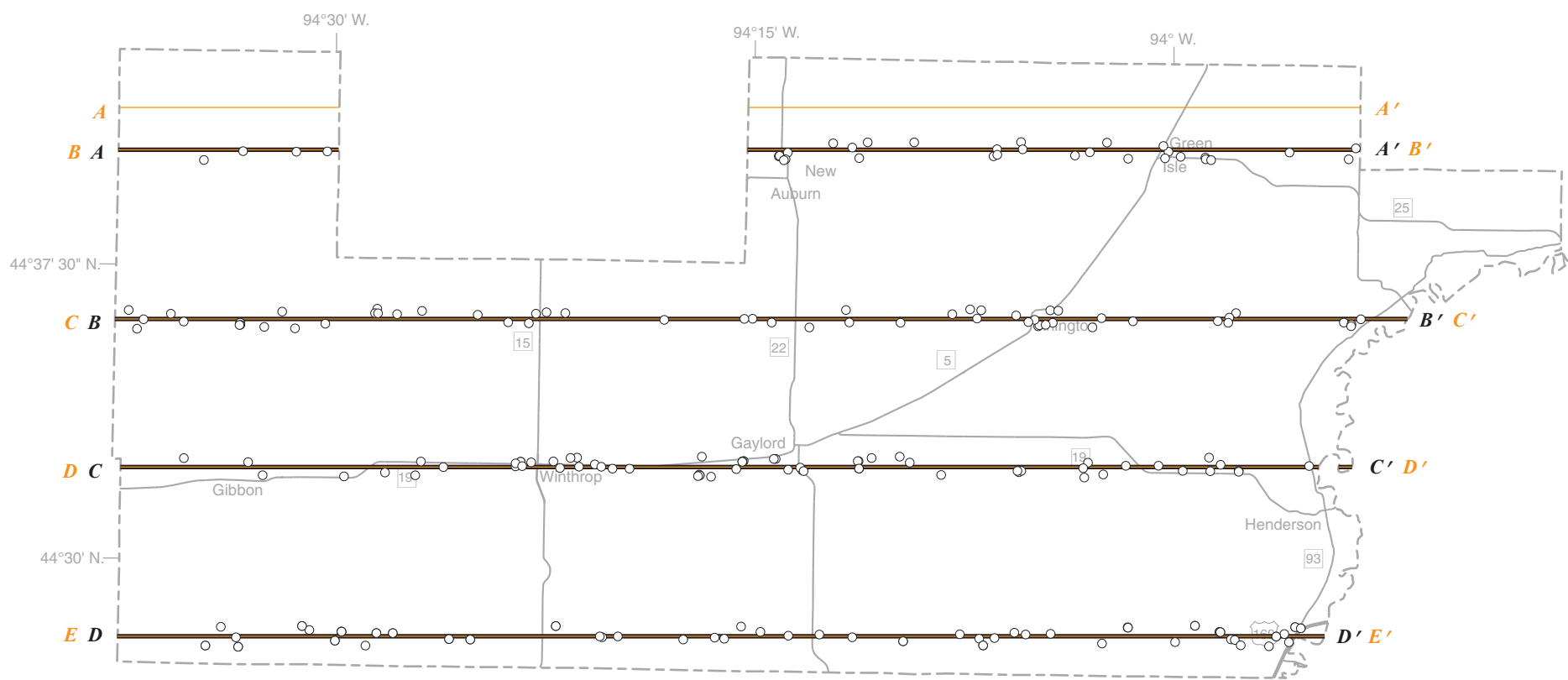
- Recent: water entered the ground since about 1953 (8 to 15 tritium units [TU]).
- Mixed: water is a mixture of recent and vintage waters (greater than 1 TU to less than 8 TU).
- Vintage: water entered the ground before 1953 (less than or equal to 1 TU).
- Well not sampled for tritium.

Symbols and labels

- 6.4 If shown, chloride concentration equals or exceeds 5 parts per million.
- 5.4 If shown, arsenic concentration equals or exceeds 5 parts per billion.
- 273 If shown, manganese concentration equals or exceeds 100 parts per billion.
- 8.9 If shown, nitrate-nitrogen concentration equals or exceeds 1 part per million.
- 3000 If shown, groundwater residence time in years estimated by carbon-14 (14C) isotope analysis
- General groundwater flow direction
- Approximate equipotential contour; contour interval 25 feet
- Geologic contact
- Land or bedrock surface
- Water table

Groundwater conditions

- Water from the surface moves through a thin layer of overlying fine-grained material to an underlying aquifer
- Groundwater moves from an overlying surficial aquifer to a buried aquifer
- Groundwater discharges to a surface-water body.
- Groundwater flowpath is unknown (deep groundwater, recent or mixed tritium age).
- Groundwater movement is out of cross section.



Symbols

- Well used to generate cross section
- Part B line of cross section shown on this plate
- Part A line of cross section

This map was compiled and generated in a geographic information system (GIS). Digital data products, including chemistry data, are available on the Minnesota Department of Natural Resources (DNR) Ecological and Water Resources Division [page](http://mn.dnr.gov/groundwatermapping) (mn.dnr.gov/groundwatermapping).

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Base modified from Minnesota Geological Survey, Sibley County Geologic Atlas, Part A, 2012. Universal Transverse Mercator projection, zone 15N, North American Datum of 1983. North American Vertical Datum of 1988. GIS and cartography by Vanessa M. Baratta and Holly Johnson. Edited by Ruth MacDonald.

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