



**Wisconsin Geological and Natural History Survey  
Miscellaneous Map 53 2001  
Groundwater Quality Investigation Maps  
of Buffalo County, Wisconsin**

*A part of the Buffalo County Groundwater Resource Investigation,  
a joint project of the Wisconsin Geological and Natural History Survey  
and the Buffalo County Board of Supervisors.*

Compiled by P.D. Roffers  
Edited by K.J. Cates

**EXPLANATION**

0.1 ferrous iron of water sample, in mg/L (Fe)

**GEOLOGIC MATERIALS CONTRIBUTING WATER TO WELL BY SOURCE OF DATA**

FROM WELL CONSTRUCTOR'S REPORT <sup>§</sup>	INFERRED FROM HOMEOWNER INFORMATION OR WELL CONSTRUCTOR'S REPORTS FROM NEARBY WELLS
● sand and/or sand and gravel	● sand and/or sand and gravel
● dolomite	● dolomite
○ sandstone	○ sandstone
● sandstone with shale and/or dolomite	● sandstone with shale and/or dolomite
	○ unknown

<sup>§</sup>Well Constructor's Report represents the most probable match of a Wisconsin Department of Natural Resources Well Constructor's Report on file at the Wisconsin Geological and Natural History Survey to the water sample on the basis of information provided by the homeowner, the location of the well as reported by the well driller, land ownership information from plat books, and building locations as shown on U.S. Geological Survey 7.5-minute topographic maps.

**NOTE:** In areas where sampled wells with the same map symbol are too close together for the symbols to be clearly identified, one symbol is used, and the water-quality results are next to the combined symbol. However, if the map symbols are different, then two slightly separated symbols are shown, and water-quality results are next to each symbol.

Samples were not acidified nor were they digested at time of collection, so iron values represent only dissolved iron at time of analysis. Therefore, some iron values as reported on this map are probably less than the total iron values present in the aquifer.

Analytical method used: 1,10 phenanthroline using FerroVer Iron Reagent and a HACH Kit; samples were not digested.

Reference: HACH Chemical Company Water Analysis Handbook, 1980 edition, p. 2-106-2-108.

Reproducibility: ± 0.1 mg/L at ≤3 mg/L; detection limit, 0.1 mg/L (Fe).

Samples were collected February 1992 through August 1993 by Brian Ristow under the supervision of Carl Duley (Buffalo County Extension Office), and were frozen prior to analysis. Chemical analyses were performed May 1992 through September 1993 by K.L. Lund (Wisconsin Geological and Natural History Survey).

**Plate 6 Ferrous Iron in mg/L (Fe)**

Data capture by M. Bridson, M. Menne, N. Richardson  
Digital cartography and editing by K.C. Roushar

Base map constructed from U.S. Geological Survey Digital Line Graph files (1990, scale 1:100,000), modified by Wisconsin Department of Natural Resources (1992) and Wisconsin Geological and Natural History Survey (2000).

*This map is an interpretation of the data available at the time of preparation. Every reasonable effort has been made to ensure that this interpretation conforms to sound scientific and cartographic principles; however, the map should not be used to guide site-specific decisions without verification. Proper use of the map is the sole responsibility of the user.*

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**Extension**

Wisconsin Geological and Natural History Survey  
3817 Mineral Point Road • Madison, Wisconsin 53705-5100  
☎ 608/263.7389 FAX 608/262.8086 <http://www.uwex.edu/wgnhs/>  
James M. Robertson, Director and State Geologist