

Wisconsin Geological and Natural History Survey
 Preliminary Hydrogeologic Maps
 of Iowa County, Wisconsin
 Plate 1

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This map shows the approximate elevation of the shallow water table in Iowa County. In some portions of the county, the uppermost water table is in the Galena aquifer. Where the Galena aquifer is absent, the shallow water table is in the sand and gravel aquifer or the St. Peter/Wonewoc aquifer. Shaded areas on the map indicate where an irregular contour interval is used.

The map was constructed by estimating the groundwater elevation from the elevations of surface-water features such as streams, lakes, and wetlands. Estimates were also made based on the depth to water recorded on 1,409 Wisconsin Department of Natural Resources well constructor's reports and well abandonment reports. Unpublished data in the Wisconsin Mineral Development Atlas, stored at the WGNHS, provided depth to water measurements from 421 borings. U.S. Geological Survey digital data for hydrography (derived from USGS, 2001), topographic quadrangles (7.5-minute series; USGS, 1996-97), and the National Elevation Dataset (USGS, 2001) were used as aids in estimating these elevations and contouring the data.

The locations of borings and wells compiled for this map are indicated with a symbol representing the aquifer in which the well is completed. At locations where the groundwater elevation was estimated from a well abandonment form, the aquifer was inferred from the total depth of the well.

The accuracy of the map varies throughout the study area, increasing near surface-water bodies and where there is a greater density of wells. In areas with no perennial surface water features and where other data were not available, the water-table elevation is inferred from topography.

This map is intended for use at the scale of publication (1:100,000). It is a regional interpretation of the water table and may not be sufficient for use at a site-specific scale. Limited field surveys of stream headwaters were conducted to assess seasonal variability in the stream locations shown on the 7.5-minute topographic maps. Data developed from well constructor's reports, well abandonment reports, and the Southwest Mineral Atlas were not field verified.

REFERENCES



U.S. Geological Survey [1996-97], Digital raster graphics of topographic quadrangles (7.5-minute series, topographic), Iowa County, Wisconsin.

U.S. Geological Survey, 2001, National elevation dataset. Online; available at URL: <<http://gisdata.usgs.net/ned/>>.



Wisconsin Department of Natural Resources Well Constructor's Reports and Well Abandonment Reports (1936-2004).


SYMBOLS

Water-table elevation, contour = 20 ft; datum is sea level

-  index contour
-  standard contour

Well data - open layer

-  Sand & gravel
-  Galena
-  St Peter/Wonewoc
-  Uncertain

 Discontinuity in water table

 Groundwater divide, approximately located

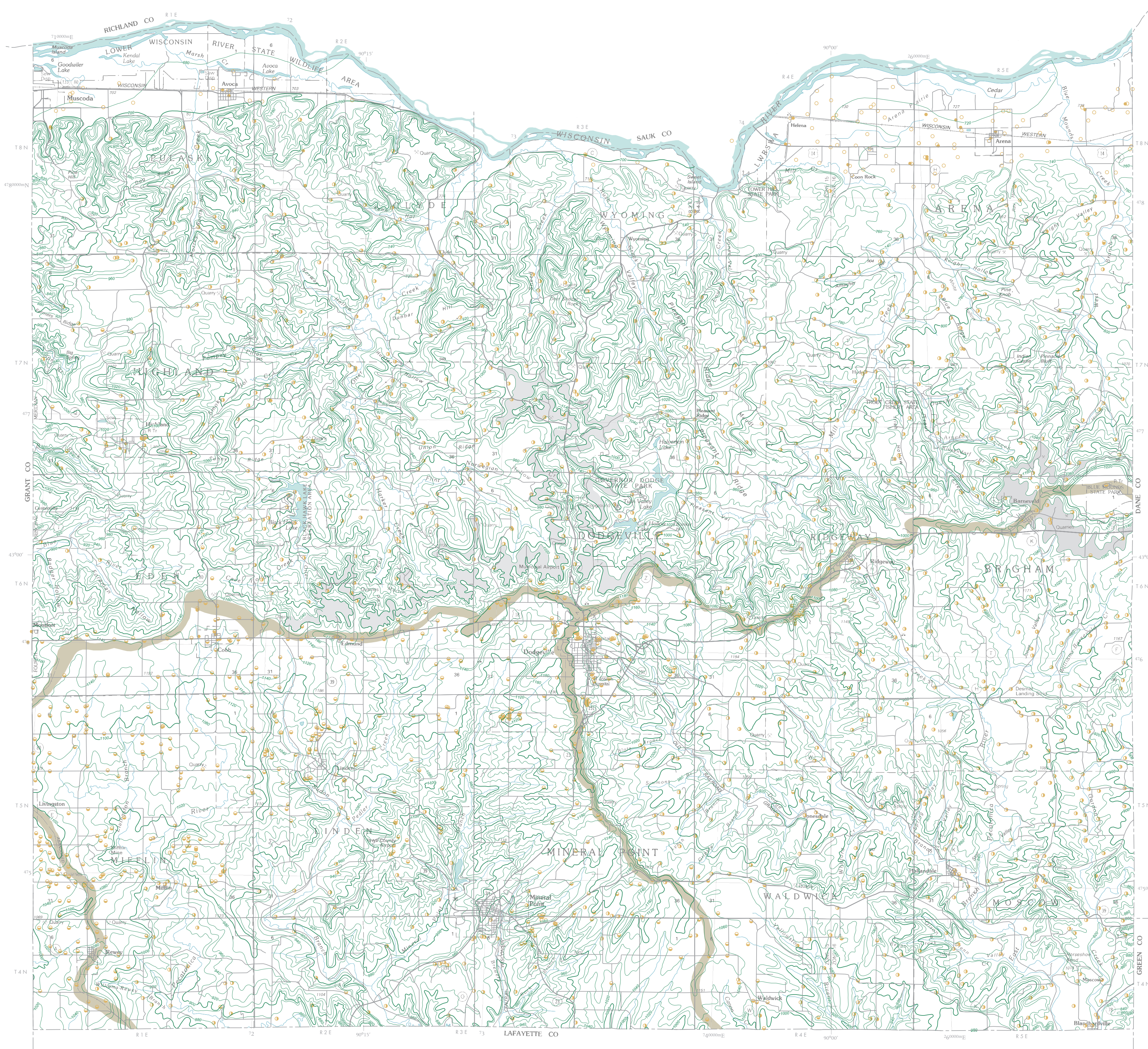
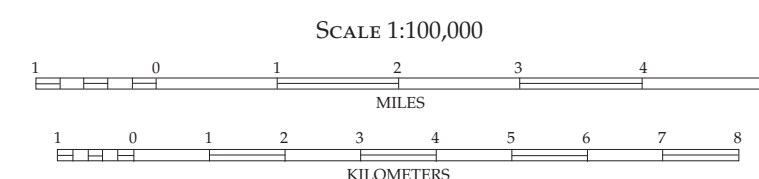
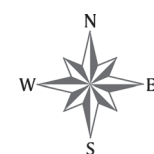


PLATE 1. PRELIMINARY WATER-TABLE ELEVATION MAP OF IOWA COUNTY, WISCONSIN

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The base map was constructed from U.S. Geological Survey digital line graph files (1990, scale 1:100,000) and modified by the Wisconsin Department of Natural Resources (1992) and the Wisconsin Geological and Natural History Survey (2007).

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