The data-base management system described here is designed so that the various underlying databases can be accessed using a single program interface. The system is built around a relational database management system (RDBMS) and uses standard SQL (Structured Query Language) for data manipulation. The data-base management system is designed to be extensible, allowing for the addition of new databases and data types as needed.

INTRODUCTION

The public health and economic importance of water and water-related materials are strongly dependent on the characteristics and quantity of the available water. Understanding the aquifer system is essential for making decisions on water allocation, development, and management. Geologic and hydrologic information is necessary to locate and describe aquifers, to estimate their yield, and to understand the potential for contamination.

DATA-BASE MANAGEMENT

All of the data shown on the maps were plotted on 7.5-minute topographic quadrangle series maps of Minnesota, using the Universal Transverse Mercator projection (UTM). Data were compiled from various sources, including published and unpublished reports, interviews, and fieldwork. The data were then organized and integrated into a relational database. This database is used to create the data-base maps shown here.

ACKNOWLEDGMENTS

The Minnesota Geological Survey provided valuable assistance in the preparation of this project. The project was funded by the Minnesota Department of Health through a grant from the United States Environmental Protection Agency.

REFERENCES


DATA-BASE MAP

By Emily J. Bauer

2001

EXPLANATION OF MAP SYMBOLS

- Source of water-well completion (well driller's log)
- Geologic map
- Geophysical log
- Seismic survey
- Groundwater level
- Tidal range
- Natural resources
- Natural resource location
- Geophysical survey

DATA-BASE MAP

The data-base map is a composite of various geologic and hydrologic data compiled and interpreted by the Minnesota Geological Survey. The maps show the location of water wells, aquifers, and geologic features. The maps are intended to provide a comprehensive view of the geologic and hydrologic conditions in Wabasha County.

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