First Occurrence of Aquifer Materials in Kingsbury County, South Dakota

Department of Environment and Natural Resources
Division of Financial and Technical Assistance
Geological Survey
Aquifer Materials Map 24
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State of South Dakota
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South Dakota Geological Survey
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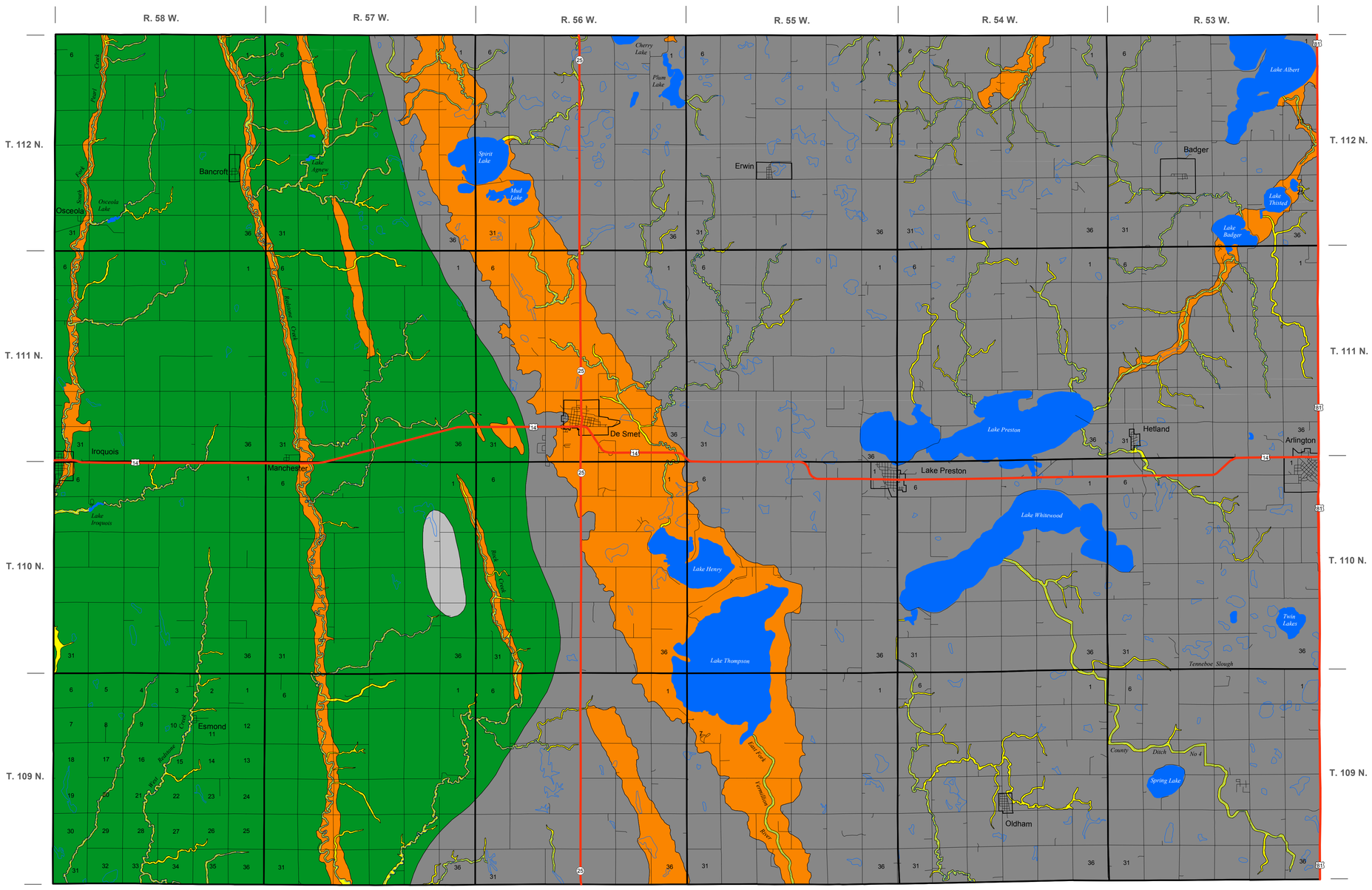

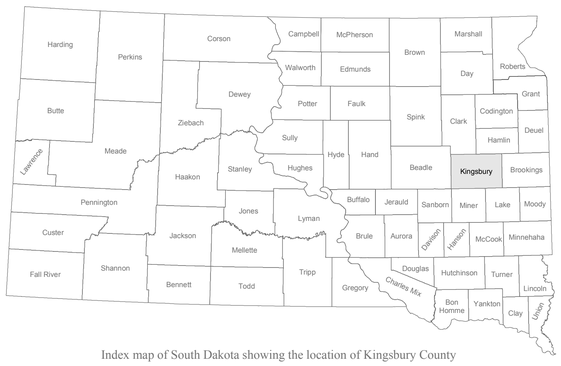

Index map of South Dakota showing the location of Kingsbury County

Scale: 1:100,000

0 1 2 3 4 5 6 Miles

0 1 2 3 4 5 6 Kilometers

N
W E
S

Explanation

This map is intended for use as a tool to aid in identifying areas underlain by aquifer material. The aquifer materials shown on this map are categorized below. This map does not show individual aquifers. There may be more than one type of aquifer material present in an area. However, only the aquifer material that would be first encountered is shown. Within the boundaries of any given map unit, there may be localized areas where aquifer material is absent. The thickness and permeability of aquifer material may vary significantly. Also, no attempt was made to distinguish between saturated and unsaturated material. Therefore, not all of the areas defined on this map may be an aquifer. Site-specific information should always be examined when making land management or water development decisions.

First occurrence is generally less than or equal to 50 feet below land surface

- **Alluvium:** Consists of clay and silt with minor amounts of sand and gravel
- **Outwash:** First occurrence is generally at land surface

First occurrence is generally greater than 50 feet and less than or equal to 100 feet below land surface

- **Sand and Gravel:** May not be uniform in depth and thickness and may be discontinuous in lateral extent

First occurrence is generally greater than 100 feet below land surface

- **Sand and Gravel:** May not be uniform in depth and thickness and may be discontinuous in lateral extent
- **Niobrara Formation:** The upper Niobrara Formation is a medium- to dark-gray, speckled, brittle, calcareous, chalk-like material; the lower Niobrara Formation is a white to light-gray, soft, gritty, marl

- Major highway
- Road
- Township boundary
- River or stream
- Lake
- Slough or intermittent lake

For township section numbering system, see T. 109 N., R. 58 W.

This map was developed from lithologic logs and published reports. The major sources of information were:

Barari, A., and Slugg, B., 1976, *Ground-water study for the Kingbrook Rural Water System*: South Dakota Geological Survey Open-File Report on Urban and Rural Studies 14, 58 p.

Hamilton, L.J., 1988, *Major aquifers in Kingsbury County, South Dakota*: South Dakota Geological Survey Information Pamphlet 41, 12 p.

____1989, *Water resources of Kingsbury and Brookings Counties, South Dakota*: U.S. Geological Survey Water-Resources Investigations Report 88-4185, 82 p.

Hammond, P.D., and Wilkie, K.M., 1997, *Ground water investigation of the Vermillion East Fork aquifer for the Kingbrook Rural Water System near De Smet, South Dakota*: South Dakota Geological Survey Open-File Report on Urban and Rural Studies 86, 16 p.

Hedges, L.S., 1962, *Water supply for the city of Lake Preston, South Dakota*: South Dakota Geological Survey Special Report 15, 24 p.

Tomhave, D.W., 1987, *Sand and gravel resources in Kingsbury County, South Dakota*: South Dakota Geological Survey Information Pamphlet 37, 65 p.

The Geological Survey, Department of Environment and Natural Resources, engages in an ongoing data collection and interpretation process. An outcome of that process is to reflect those interpretations on maps such as this one. Reasonable efforts have been made to ensure that this map accurately reflects the source data used in its preparation. This map is date specific. As additional data become available, geologic interpretations may be revised and the map may be updated by the Geological Survey. This map should not be enlarged or otherwise used in an attempt to interpret more detail than can be seen at the 1:100,000 scale.

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