

Groundwater Resources Program

Regional Assessment of Groundwater Availability of the Ozark Plateaus Aquifer System

The U.S. Geological Survey's Groundwater Resources Program (GWRP) is conducting an assessment of groundwater availability throughout the United States to gain a better understanding of the status of the Nation's groundwater resources and how changes in water use and climate may affect those resources. Assessments will be completed for the Nation's principal aquifer systems to help characterize how much groundwater is currently available, how groundwater availability is changing, and how much groundwater we can expect to have in the future (<http://water.usgs.gov/ogw/gwrp>).

Groundwater is an important resource in the Ozark Plateaus area, therefore the GWRP is considering a groundwater availability assessment of the Ozark Plateaus aquifer system beginning in 2013 or 2014.

Objectives and Scope

The primary objectives of this proposed assessment are to quantify current groundwater resources, evaluate how these resources have changed over time, and provide the tools needed to simulate system response to future human-related and environmental stresses. Additionally, this proposed regional assessment will provide temporal information about the inflows, outflows, and changes in system-wide groundwater storage and provide information to assist in the evaluation and design of existing and new groundwater monitoring networks. This proposed assessment complements previous simulation models and builds upon the Ozark Regional Aquifer System Analysis work from the 1980's and 90's. This regional assessment will provide:

1. Testing of projected changes in water use on aquifer water levels and storage
2. Examining potential impact of climate change on groundwater availability
3. Testing of saline/fresh water interface movement under transient conditions
4. Application of improved modeling software
5. Increased horizontal and vertical model discretization
6. Enhanced hydrogeologic framework

Proposed Products and Publications

- (a) Scientific Investigations Report on the refined hydrogeologic framework and conceptual model
- (b) Scientific Investigations Report documenting the development and calibration of the regional groundwater model
- (c) Professional Paper describing current and projected water availability in the Ozark Plateaus aquifer system
- (d) Fact Sheet describing key results documented in the final Professional Paper.

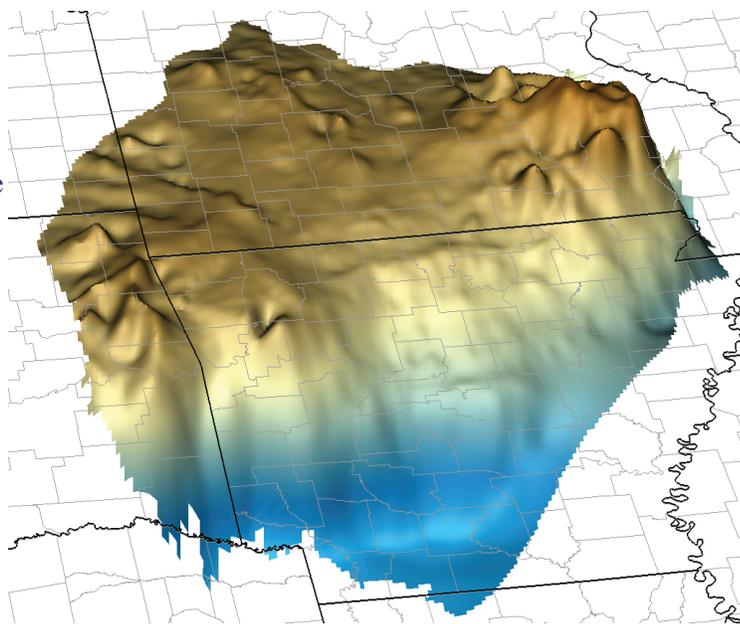


Figure 1. Oblique three dimensional view of the base of the Ozark Plateaus aquifer system.

Follow the progress at <http://ar.water.usgs.gov/ozarks>