

## **Groundwater and Streamflow Information Program, Kansas Cooperative Water Science since 1895**

"The streamflow data provided by USGS is critical for reservoir operation and management decisions. These data help KWO ensure water-supply customers get the quantity needed and target flows are met for downstream users." —Earl Lewis, Assistant Director, Kansas Water Office



In 2018, USGS operated 216 streamgages, 19 groundwater sites, and 21 water-quality sites.

**WHO**—The U.S. Geological Survey (USGS) Groundwater and Streamflow Information Program and cooperative matching funds the collection and interpretation of streamflow and groundwater data to answer large-scale scientific questions related to natural and human-affected water flows.

**WHAT**—The data interpreted for studies by the USGS include flood frequency used for design of bridges and culverts, low flow and flow duration used for assessing water-supply risk, flood inundation used to assess flood risk and mitigation, alternative water supplies (such as aquifer storage and recovery), and environmental and climatological studies.

**WHERE**—Interpretive studies, based on these data, can reliably evaluate trends across the range of hydrologic conditions—from drought to flood—to help preserve water supplies in the future for the health and economy of Kansas and the rest of the Nation.

**WHY**—This information is critical to improve scientific understanding of water availability and water quality for water supply and public safety.

**HOW**—Public access to all USGS data allow other Federal, State, educational, and private entities to analyze these data.

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Real-time streamflow information provided by the USGS has multiple uses: The State of Kansas develops water policy and administers regulations; the National Weather Service forecasts floods; the U.S. Army Corps of Engineers manages reservoirs to ensure an adequate water supply, minimize flooding and prevent loss of human life and property; and numerous public water-supplies that depend on streamflow effectively manage their water plants and treatment facilities.

Groundwater and Streamflow Information Program

The USGS has measured and interpreted streamflow in Kansas since 1895 using cooperative matching funds with the Kansas Water Office, Federal Priority Streamgages, U.S. Army Corps of Engineers, and other Federal, State, local and tribal agencies. As part of the USGS National Streamflow Network, USGS data and interpretation provide the knowledge necessary for reservoir design and operation, public safety, and the unbiased accounting of streamflow throughout the hydrologic systems of the Nation and Kansas.



Total funding for streamgaging in fiscal year 2018 was \$2.9 million.

## **Program Strengths**

- The first streamgages as part of a USGS cooperative funding agreement were in Kansas in 1895. Today, over 110 streamgages are funded in part by Federal matching funds.
- Cooperative funding agreements with 34 State and local agencies for data collection and interpretation.
- Shared costs of streamgaging are driven by shared benefits.
- Federal, State, and local relevance ensured through cooperator interaction applicable to regulatory, management, policy, and jurisdictional needs.

- USGS provides impartial information universally available and accepted.
- Offers national and regional assessment to adapt to emerging key issues.
- Foundation for national monitoring networks data delivery systems.
- 850 cooperators help to support 70 percent of the 8,000+ streamgages nationwide.