

Suspended Sediment Data Collection Network

Fact Sheet No. 14

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Kansas Water Office

Background

The State of Kansas has collected a vast amount of water resource data. Included is data on the total load of suspended sediment in flowing streams. Generally samples were collected over a wide range of flow conditions at numerous U.S. Geological Survey gaging stations across the state.

Funding levels in the mid 1980's at the state and federal level reduced the amount of money available for data collection, including suspended sediment data. Prior to the reduction in funding levels, the state's portion of the costs was paid through State General Fund allocations. The suspended sediment collection network was funded within the same allocation as the stream gaging network. Because of reduced funding, the sediment data collection and some gaging stations were eliminated.

The State Conservation Commission funds soil and water conservation practices designed to reduce sediment loading to streams. The Kansas Water Office has acquired and administers water supply storage in several federal reservoirs. The Kansas Department of Health and Environment is currently involved with Total Maximum Daily Load (TMDL) analysis and implementation. These programs, and others, require data on the amount of suspended sediment in Kansas streams.

Purpose

The purpose of the suspended sediment data collection network is to gain a better understanding of the amount of sediment in the stream under the full range of flow conditions at various regions in the state. This information will be used to evaluate the effectiveness of soil conservation measures, the siltation rate of reservoirs and aid in analysis of water quality.

Overview

In fiscal year 2000, the Kansas Water Office initiated a contract with the U.S. Geological

Survey to study suspended sediment at 12 stream gaging locations throughout the state. The four-year plan calls for the State Water Plan Fund to provide \$30,000 in fiscal year 2000, \$30,000 in fiscal year 2001, \$36,000 in fiscal year 2002 and \$45,000 in fiscal year 2003. State Water Plan Fund money dedicated for assessment and evaluation purposes is being used to fund this contract.

The gaging stations are located in 10 of the major river basins and cover a range of hydrologic situations. The study covers 12 gaging sites because of limited funding for this program.

Sites were selected based on the following criteria:

1. The site has adequate historic data to complete trend analysis.
2. The site is low enough in each basin to catch the majority of surface runoff.
3. Some sites be located above federal lakes in which the state owns storage.
4. Sites be usable for evaluation of soil conservation measures.

The U.S. Geological Survey will collect samples for four years and compare those samples with historic data from the same site. The contract requires six samples be collected at each site each year.

Each year the U.S. Geological Survey will attempt to collect samples from a variety of flow conditions. The amount of sediment that is contained within a stream varies both with time and the amount of water flowing in that stream. It is important that the full range of expected flows be sampled if possible. Completing collection at only low flows, for example will lead to inaccurate conclusions and improper planning for the future.

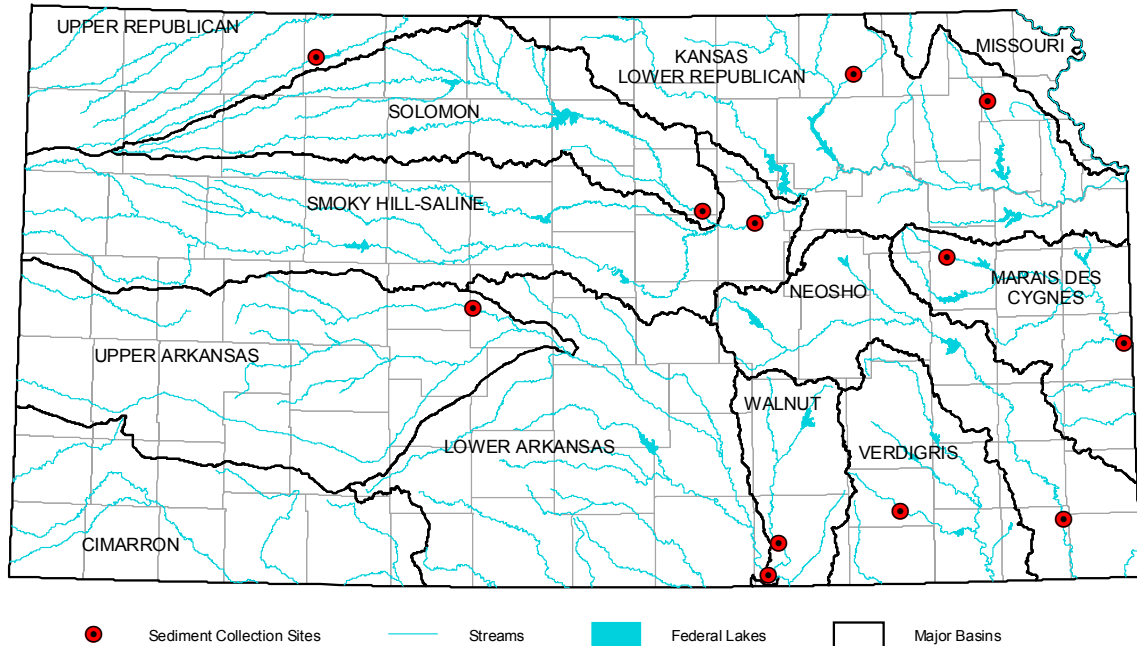
The final products of this study will be additional data on suspended sediment and analysis of the trend of sediment loading of Kansas' streams. A report will be completed describing the trends and comparing current samples to data collected prior to 1985 program funding.

reductions. The data, analysis and report will allow the Kansas Water Office to better plan for the effects of sediment on public water supply lakes and water quality in the stream. Appropriate

conservation or remediation measures can then be implemented more effectively.

The map below shows the relative location of the suspended sediment data collection locations.

Suspended Sediment Data Collection Network



Additional Information

Further information on this subject or on many other *Kansas Water Plan* related programs can be obtained from: Kansas Water Office, 901 S. Kansas Avenue, Topeka, KS 66612-1249, phone (785-296-3185), toll free (888-KAN-WATER) or check our WEB site at www.kwo.org.