

PUBLIC WATER SUPPLY

INTRODUCTION

Under Kansas law (K.S.A. 65-162a) a public water supply system is defined as "...a system for the provision to the public of piped water for human consumption, if such system has at least ten (10) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. Such term includes any source, treatment, storage or distribution facilities under control of the operator of the system and used primarily in connection with the system and any source treatment, storage or distribution facilities not under such control but which are used in connection with such system."

Kansas has about 1,100 public water supply systems. Public water supply systems are typically managed by a public entity, such as a municipality or a rural water district, but may also be managed privately. The governing bodies of public water supply systems bear primary responsibility for providing an adequate supply of high quality drinking water to the public.

In eastern Kansas, the primary source of water is surface water: rivers, federal reservoirs, multipurpose small lakes and municipal lakes. In western Kansas, the primary source is ground water drawn from wells that reach into the water bearing aquifers. While 68 percent of the State's public water systems rely upon ground water sources, these systems serve only 29 percent of the population. In 2000, average gallon per capita usage for public water suppliers ranged from a high of 306 in western Kansas to a low of 95 in eastern Kansas. Per capita averages increased approximately 19 percent from 1999 to 2000 in western Kansas, while in eastern Kansas per capita average increased by only two percent over the same period.

Most Kansas public water suppliers have their own source of raw water. Such sources include wells in alluvial or deeper aquifers, streams and rivers, springs or municipal lakes. Several suppliers use lakes developed through the Kansas Multipurpose Small Lakes Program.

Use of these sources requires a water right from the Kansas Department of Agriculture, Division of Water Resources. The maximum annual authorized quantity of water that can be diverted is established by the water right. Other sources of raw water include the Kansas Water Marketing Program and direct purchase of water in federal reservoirs from the federal government.

Under the Kansas Water Marketing Program, the State of Kansas has bought water supply storage in 12 federal reservoirs. Water from this storage space may be bought from the state for municipal or industrial use. Many public water suppliers also buy finished water at wholesale from another supplier, either as a sole source of supply or to supplement their own source(s).

Kansas' goal is to insure that all federal and state drinking water quality standards are met and capacity development goals are achieved by public water suppliers. Regulation of public water supply systems is accomplished through the Kansas Department of Health and Environment's Public Water Supply Program. The Department administers all requirements of the Federal Safe Drinking Water Act with statutory authority identified in K.S.A. 65-171m. Technical and financial assistance is also provided through a variety of government programs administered by state and federal agencies.

The Kansas Department of Health and Environment Drinking Water Program indicates that in 2000, the overall compliance rate with monitoring or Maximum Contaminant Levels for Kansas public water supply systems was 85 percent. A total of 165 systems incurred at least one violation of a drinking water regulation. This means that 957 of the 1,098 systems operating had no violations in 2000. Ninety-one percent of the Kansas population was served by water systems in compliance with federal and state drinking water regulations. Only nine percent, or 223,589 people, were affected by water systems that had monitoring or Maximum Contaminant Level violations.

Although Kansas has a good record of compliance with drinking water standards, public water suppliers still face many challenges. The state has two financial assistance programs available for public water supply projects. The Drinking Water State Revolving Loan Fund, administered by the Kansas Department of Health and Environment, has provided \$122 million in low interest loans since 1998 to public water suppliers to help them meet their increasing responsibilities under the Safe Drinking Water Act. In 2001, the Kansas Department of Commerce and Housing provided a total of \$4,044,515 in Community Development Block Grant Program grants to utilities with low and moderate-income customers for water supply projects.

The Safe Drinking Water Act as amended in 1996 makes capacity development an important strategy in preventing public water supplier problems. Capacity development involves helping public water suppliers improve their finances, management, infrastructure and operations so they can provide safe drinking water consistently, reliably and cost-effectively. Capacity has three components: technical, financial and managerial, each of which must be adequate for a public water supplier to achieve overall capacity (capability). *Technical capacity* refers to the physical infrastructure of the water system, including source water adequacy, infrastructure adequacy (wells and/or water intakes, treatment, storage and distribution), and the ability of system personnel to implement requisite technical knowledge. *Financial capacity* refers to the financial resources of the water system including revenue sufficiency, credit worthiness and fiscal controls. *Managerial capacity* considers the management structure of the public water supplier including ownership accountability, staffing and organization and effective linkages.

Another provision of the 1996 amendments to the Safe Drinking Water Act requires each state to develop a Source Water Assessment Program. Additionally, each state is required to develop a source water assessment for each public water supply system that treats and distributes raw source water. An assessment includes the delineation of the source water assessment area, an inventory of potential contaminant sources, susceptibility analysis, and

public information. Source water assessments in Kansas are being done in partnership with the affected public water suppliers.

Drought can severely challenge a public water supplier through depletion of the raw water supply and greatly increased customer water demand. Even if the raw water supply remains adequate, problems due to limited treatment capacity or limited distribution system capacity may be encountered. The Kansas Water Office has developed guidelines for development of municipal water conservation plans that contain a drought/emergency contingency component. A key element is identification of triggers for imposing voluntary or mandatory water use restrictions. Approximately 80 drought vulnerable public water suppliers have state approved water conservation plans. Forty-four public water suppliers are known to have imposed water use restrictions at some time in 2002. Water conservation is also an effective mechanism for reducing long-term demand by reducing waste and lowering the amount of water used on a per capita basis. The Water Conservation Policy Section addresses public water suppliers with excessive unaccounted for water.

The State encourages the development of regional public water supply systems. Regionalization of public water supply service in Kansas usually involves formation of a public wholesale water supply district. Wholesale water supply districts are commonly comprised of several member municipalities or rural water districts that may rely upon the water provided by the wholesale district to supplement their own water supply sources or to provide their entire water supply. Wholesale districts provide the advantages of economies of scale that commonly are not available to their individual members.

Wholesale districts generally use a reliable water supply source such as a Kansas Water Marketing Program contract from a federal lake or a multipurpose small lake and have a newer water treatment plant that can readily be upgraded to meet more stringent Safe Drinking Water Act requirements as they become effective.

Regionalization is a key state strategy for ensuring that small systems attain and maintain technical, financial and managerial capacity. Regionalization is further encouraged by Kansas statute. K.S.A. 65-163(g) (2) states that the Secretary of the Kansas Department of Health and Environment shall, "in consultation with the Kansas water office, encourage regional cooperative public water supply projects in accordance with the public water supply regionalization strategy of the state water plan;..." In addition, the development of regional systems provides a mechanism for the efficient distribution of raw and finished water supplies for municipal use from existing state-owned storage in federal lakes, multipurpose small lakes or other supply sources. Priority for state funding should encourage water supply planning and construction projects that are cost-effective.

Twenty-three public wholesale water supply districts have been organized in Kansas, to date. Not all of these districts are actively delivering water. Several have been organized recently and have not yet had the time to develop the infrastructure to deliver water. Others were formally organized but never became operational.

KANSAS WATER PLAN OBJECTIVES

- By 2010, ensure that sufficient surface water storage is available to meet projected year 2040 public water supply needs for areas of Kansas with current or potential access to surface water storage.
- By 2010, less than five percent of public water suppliers will be drought vulnerable.
- By 2010, ensure that all public water suppliers have the technical, financial and managerial capability to meet their needs and to meet Safe Drinking Water Act requirements.

STATUTORY FRAMEWORK

- Long-range goals of the State related to public water supply are “the development, to meet the anticipated future needs of the people of the state, of sufficient supplies of water for beneficial purposes” (K.S.A. 82a-927(a)) and “the efficient, economic distribution of the water supplies of the state (K.S.A. 82a-927(g)).”
- The development of adequate water storage to meet, as nearly as practicable, present and anticipated water uses through planning and construction of multipurpose reservoirs and through the acquisition from the federal government of storage in federal reservoirs and by agreements with the federal government regarding the use of storage (K.S.A. 82a-928(f)).
- The design of municipal water systems to provide an adequate water supply to meet the needs during a drought having a two percent chance of occurrence (K.S.A. 82a-928(q)).
- The achievement of the primary drinking water standards promulgated by the Secretary of Health and Environment pursuant to K.S.A. 65-171m, and amendments thereto (K.S.A. 82a-928(h)).
- The provision of financial and technical assistance to public corporations concerned with management, conservation and development of water resources (K.S.A. 82a-928(m)).
- The encouragement of local initiative in the planning, implementation, funding and operation of local water programs to the extent that the same are supportive of state water programs (K.S.A. 82a-928(p)).
- The Kansas Department of Health and Environment has authority under Kansas law (K.S.A. 65-163) to regulate public water supply systems through permitting, investigations, and regulations.