



A "public water system" is an entity that provides water for human consumption through pipes or other constructed conveyances. Most city-owned public drinking water systems are classified as "Community Systems". A Community Water System (CWS) is a public water system that supplies water to the same population year-round. Over 286 million Americans get their tap water from a community water system.

Congress passed the Safe Drinking Water Act (SDWA) in 1974 to protect public health by regulating the nation's public drinking water supply. Under the SDWA, the U.S. Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Kansas Department of Health and Environment (KDHE) is the primary agency in Kansas that oversees the regulations that insure community systems deliver safe water to customers. No new system can be built in Kansas unless specific design standards are met. KDHE regulations require all such systems to be operated by a state certified water operators. Systems send samples of their water to KDHE or a certified laboratory on a set schedule basis where the water is tested for compliance. The role of KDHE is to monitor and insure regulatory compliance.

Sources of drinking water are subject to contamination and require appropriate treatment to remove disease-causing contaminants. Contamination of drinking water supplies can occur in the source water as well as in the distribution system after water treatment has already occurred. The presence of contaminants in water can lead to adverse health effects.

The Four Expectations of Drinking Water System Management

1. Provide safe drinking water (potable water) all of the time.
2. Provide an adequate quantity of water to meet the demands of all customers all of the time.
3. Provide water to each customer when demanded at all times.
4. Provide good and fair service to all customers all of the time.

A community drinking water system can be designed to benefit a community in other ways too. Fire protection is often incorporated into a distribution system. Such a system is called a dual purpose system. A community with a fire protection system typically has lower insurance rates than a community with no system to provide water to fight fires.

Sometimes it is necessary to size distribution lines to be large enough to deliver potable water to large users that provide jobs and economic development. When designing a new system, it is wise to determine if it needs to be sized for future economic development, or if its purpose is only to provide potable water to residential customers.

Public drinking water systems often benefit homeowners by increasing the value of homes, and make it easier to sell them in the future because prospective buyers can get a loan easier.

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