

Every System Should Develop and Update Its Water Conservation Plan

Developing or updating a Water Conservation Plan gives water supply systems the ability to know what to do in case there is a water supply shortage. Having a water conservation plan in place can eliminate a lot of debate that might otherwise require board or council meetings to resolve at times when there's too little time for discussion.

The goal of developing a Water Conservation Plan is to ensure that customers have a dependable water supply. Developing a plan is not difficult. The difficulty may come when implementing the plan. Whether caused by drought, failing wells, problems with treatment, natural disasters, broken mains, etc., knowing what to do can help maintain critical water service to customers.

Developing a plan

The Kansas Water Office has provided assistance to systems wishing to develop water conservation plans. My advice is to contact Tina Rajala at the Kansas Water Office at 785/296-0875. As an option, you may also contact Kansas Rural Water Association (KRWA) at 785/336-3760 or by email at krwa@krwa.net or directly to me at greg@krwa.net. A draft plan will be developed specifically for your system based on the water use history.

Water conservation plans in Kansas have three major areas: Education, Management and Regulation. Each section requires a reasonable amount of information.

For example, the Education section may include up to eight water use efficiency practices depending on the water use history for the system. The most common statement for water

suppliers is to have "Water bills will show the amount of water used in gallons and the cost of the water". Others range from providing water conservation tips in the monthly billing to involving the Board of Education and school teachers to become involved in water conservation through classroom presentations and incentives for children to conduct water service checks in their homes.

The Management portion of the Plan challenges the city or RWD to making sure the development of the Plan will be accountable, in other words, making sure the Plan is used instead of just collecting dust on a shelf. Efficiency practices that may be included are:

- metering source water and repairing or replacing within two weeks when malfunctions occur,
- testing source water meters once every three years,
- installing meters at each residential connections and at all other connections that may exceed 300,000 gallons,
- testing meters for accuracy or replacing meters at each service connection on a regular basis,
- reading all source water meters at least once per month and all service connections at least once every two months,
- reading source water meters and service connections during the same time period; implement a management review when the water loss is greater than twenty percent for four months,
- basing water sales on water used vs. estimated.

The water system may also choose to design a water rate structure to curb excessive use of water. Other management tools might include

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developing a program to encourage water conserving landscaping, developing an irrigation management program for irrigated grounds; or, encouraging recycling of wastewater for selected industrial or irrigation purposes. While establishing some of these practices may sound difficult, they are not. Many of these practices may already be implemented by the system. Target dates would need to be set for those practices that are not presently being conducted.

The one practice that will be difficult for some rural water districts is to read customer meters at least once every two months. There continues to be many rural water districts in Kansas that are customer-read. Those districts typically verify all meter readings one or two times per year. In order to have the Plan approved by the Kansas Water Office, the district would need to explain why it is not feasible to read the meters more frequently. Reasons often cited are due to lack of personnel or high cost of reading meters. Each system is unique and the circumstances will be different.

The Regulation portion of the plan may require the adoption of a landscape watering conservation ordinance or require that all new or renovated construction will install toilets that use less than 1.5 gallons per flush or less, and low flow showerheads. Both are designed to conserve water.

KANSAS RURAL WATER association

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Current Projects: Special focus to reduce water loss

The Kansas Rural Water Association provides targeted assistance to public water systems identified by the Kansas Water Office as having high unaccounted for (>30%) water loss. These systems are referred to as "Special Focus Projects." Check below for a brief report on the work by KRWA with the systems assigned to KRWA under the 2010 contract. Funding for this assistance is provided through the Clean Drinking Water Fee, and administered by the Kansas Water Office. This report is for the period **January 1 through March 31, 2011.**

See also **Summary Report, Fiscal Year 10** for results from July 1, 2009 to June 30, 2010.

Chase RWD 1	Chase RWD 1 reported repairing one leak in February. KRWA tech Jon Steele again offered assistance in conducting a water loss survey to locate the source of unaccounted for water. Unaccounted for water loss is: Apr - June 2010 = 50.1%, July - Sept 2010 = 42%, Oct - Dec 2010 = 17.3%, Jan - Mar 2011 = 56.2%.
Cherokee RWD 1	Cherokee RWD 1 plans to replace 40% of the customer meters in 2011. The district reported locating and repairing six leaks from January to March 2011. Unaccounted for water loss is: Apr - June 2010 = 29.4%, July - Sept = 28%, Oct - Dec 2010 = 32.7%, Jan - Mar 2011 = 36.3%.
Cherokee RWD 4	Cherokee RWD 4 has reported locating and repairing forty-two leaks from January to March 2011. KRWA tech Eric Davolt has scheduled a meeting to test the master meters for the district in April 2011. Unaccounted for water loss is: Apr - June 2010 = 37.4%, July - Sept 2010 = 36.7%, Oct - Dec 2010 = 49.2%, Jan - Mar 2011 = 44.6%.

This screen shot of the KRWA Web site features the "Special Focus" projects which are those water systems having unaccounted for water of thirty percent or more. The experience of KRWA's work with those systems is listed on the site. The systems are identified to KRWA by the Kansas Water Office.

The next portion of developing a Plan is the Drought Response. This includes steps for situations that progressively worsen. These are Water Watch, Water Warning and Water Emergency.

The Water Watch, Warning and Emergency all have goals to heighten public awareness to reducing daily peak demands and also reducing overall weekly consumption. Each category will have Triggers that help the system identify which stage they may be in. It is possible to go directly to a Water Emergency because of system repairs or water quality. If the treatment plant, wells or distribution system have any major problem, then reducing water use will be critical.

The Management Actions outline what the water supplier will do to alleviate the problem. Regulation Actions will range from asking the public to curtail some outdoor water use to banning outdoor water use and prohibiting the waste of water.

Each public water supplier will also need to have an Ordinance (city) or Resolution (RWD) passed by the governing body. This document authorizes the declaration of one of the three stages of water supply conservation and / or water supply shortage, which will conserve or curtail the use of water. This document also establishes the procedures and voluntary and mandatory conservation measures, which authorize the issuance of administrative regulations and prescribe certain penalties.

While developing a Water Conservation Plan may sound difficult it is really just the opposite. Each public water supply is already concerned about providing potable water to their customers. The Plan gives the governing body another tool to use to work to achieve that goal.

Even if your system does not have a Water Conservation Plan there are still things you can do to keep the public

informed. One way is to provide water conservation tips with the monthly billing. The following link takes you to the Kansas Water Office Web site for water conservation:

<http://www.kwo.org/KWO%20Programs%20and%20Projects/Water%20Conservation%20Education.htm>

Go to the Water Conservation Bookmark Templates about three-fourths down the page. There are four bookmarks at that link; they can either be provided to customers or be added with other information in utility bills.

Getting started is often the most difficult task to make a difference on water conservation. The Kansas Water Office and KRWA are available to help systems develop a Water Conservation Plan specific to your system. There is no charge.

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