

## What's Down the Road? Clancy Dempsey

Although we have had a pretty enjoyable spring with cool temps, and not much severe weather, it is only natural to wonder what the long days of summer have in store for us. Many areas around the state have received much needed rainfall, a few areas have received too much and experienced significant flooding, and others still remain dry. Despite a moist April in Lincoln, which is where I live, we were two inches below average precipitation in May. Voluntary odd/even lawn watering restrictions are in effect by the city. I have already spent quite a few recent evenings watching the local news in hopes of a rainy forecast so that I can avoid dragging out the hose and sprinkler. With this in mind, it is probably a good time to discuss water conservation.

Water conservation has different meaning to different people.

For those in farming it may mean monitoring soil moisture and crop condition to improve the timing of irrigation water application; it may mean converting from gravity to center pivot irrigation to reduce overall water usage; it could mean changing out nozzles to achieve a more uniform application of water to crops; yet another explanation is to line irrigation canals and ditches to minimize water transport losses.

For municipalities, water conservation can be equally complicated. The extra revenue from increased water usage by residents during the summer months can be important to the water system's bottom line. However this can be offset by the need to curtail overall water usage so that excessive draw down does not pose a risk to the water system's ability to provide an adequate supply. Despite the different factors that can come into play, having a water conservation plan, or a strategy to prevent or respond to an emergency water shortage, is a good idea for any water system.

I have worked with several communities for which protecting water quantity is just as important as protecting water quality. Typically these communities have a drought ordinance to be enforced when conditions warrant doing so or they have developed a detailed water conservation plan. If anyone is interested in reviewing what other communities have done, examples are available upon request.

There is a variety of useful information on-line as well. An Internet search using the key words "water conservation plan" yields a tremendous amount of information. Notably, the EPA has established basic guidelines specifically for water systems serving populations of 10,000 or less ([www.epa.gov/owm/water-efficiency/wave0319/basic.pdf](http://www.epa.gov/owm/water-efficiency/wave0319/basic.pdf)). The guidelines consist of five steps:

### 1. Specify Conservation Planning Goals

Water systems should state their goals in specific terms. Measurable goals are useful for evaluation purposes. For example, a water system may set a goal to reduce water usage by 15%.

## 2. Develop a Water System Profile

Developing a system profile by taking inventory of existing resources helps systems assess their present circumstances and design strategies to meet their future needs.

## 3. Prepare a Demand Forecast

For small cities and villages, forecasting water demand can be as simple as projecting future population growth and the corresponding increase in water demand. Five and ten year forecasts are useful starting points.

## 4. Identify and Evaluate Conservation Methods

A wide selection of water conservation strategies are available to water systems ranging from educational tools to customer incentive/rebate programs.

## 5. Present Implementation Strategy

In this final step the water system specifies its strategy and timetable for implementation. A plan for monitoring progress and evaluating success is essential for realizing whether or not goals are being met.

Ideally the water system's governing body, such as the village board or city council, would adopt the water conservation plan. A timetable for updating and revising the water conservation plan is also necessary. Every five years may be adequate for many systems, but changing conditions may require more frequent updating.