



Chanute
a TRADITION of INNOVATION

**MUNICIPAL WATER
CONSERVATION PLAN
FOR THE
CITY OF CHANUTE**

JUNE 2010

Municipal Water Conservation Plan

For the City of Chanute

TABLE OF CONTENTS

INTRODUCTION

LONG TERM WATER USE EFFICIENCY

- Water Use Conservation Goals

- Water Conservation Practices

- Education

- Management

- Regulation

DROUGHT RESPONSE

- Stage 1: Water Watch

- Stage 2: Water Warning

- Stage 3: Water Emergency

PLAN REVISION, MONITORING AND EVALUATION

INTRODUCTION

The primary objectives of the Water Conservation Plan for the City of Chanute are to develop a long-term water conservation plan (Long-Term Water Use Efficiency Section) and short-term water emergency plan (Drought Response Section) to assure the City customers of an adequate water supply to meet their needs. The efficient use of water also has the beneficial effect of limiting or postponing water distribution system expansion and thus limiting or postponing the resultant increases in costs, in addition to conserving the limited water resources of the State of Kansas.

The City of Chanute has undertaken a number of steps to ensure a dependable water supply for our customers during the past 50 years. The water supply for our City is obtained from the Neosho River. The intake is located on highway 39 east of town. Treated water storage facilities consist of a 250,000-gallon, a 500,000-gallon, and a 1,000,000-gallon elevated storage tanks. Our City water supply and distribution system have ample capacity to meet current customer demands and future projected demands with the possible exception of extended drought periods. The City of Chanute believes that our Municipal Water Conservation Plan represents an additional step in ensuring our customers of a dependable water supply.

LONG-TERM WATER USE EFFICIENCY

Water Use Conservation Goals

The City of Chanute used 112 gallons per person per day (GPCD) in 2008. This GPCD figure included:

- Water sold to residential/commercial customers;
- Water distributed for free public services (fire protection, parks, cemeteries, etc.); and
- Water lost by leaks in the water distribution system.

However, the GPCD figure does not include municipally supplied water for industries that use over 200,000 gallons per year.

According to Figure 1, shown in the 2008 Kansas Municipalities Water Use Publication our City is located in Region 8. From this publication it was determined that our City GPCD water use was 112, which was 22 percent above the region average of 92 GPCD among cities in Region 8 during 2008. The City desires to set a water use conservation goal for usage not to exceed 98 GPCD based on the regional average of the last five years (2004 thru 2008). Our City anticipates not exceeding this goal by carrying out the specific actions that are outlined in our plan.

Water Conservation Practices

This subsection of the plan summarizes the current education, management and regulation efforts that relate to the long-term conservation of water in the City. Specific practices that will be undertaken to conserve water are listed and a target date to begin each practice is also shown.

Education

The City water bills show the total number of cubic feet of water used during the billing period and the amount of the bill. The City has an information channel on the local cable service that routinely shows water conservation tips. Also this information and a link to water conservation tips are located on the City web page.

The City has chosen the following conservation practices and target dates for the Education Component of the Long-Term Water Use Efficiency Section of our Water Conservation Plan.

Education Conservation Practices Taken with Target Date

1. Water bills will show the amount of water used in gallons by 2010.
2. Work with Board of Education and Teachers to present water conservation information in classrooms by 2012.

Management

The City of Chanute has water meters on all water supplies and water pumped to the distribution system. Any new supply will have an individual meter on each source of supply. These meters are read monthly.

Water meters were installed for all residential/commercial customers by 1965. Customer meters are checked for accuracy and possible repair or replacement upon receiving a request to do so from the customer. The City has a practice of replacing meters after approximately 10 years of service.

The City of Chanute reads each customer's water meter monthly and mails a water bill. Customer water meters are generally read during the same week of the month; however, the meter reader will occasionally deviate from the scheduled time period.

Water leaks from the City public water distribution system are repaired when found. They are found when customers report leaks or low pressure from the water mains, and as they are located by City Personnel. Water pressure is checked throughout town annually by the Fire Department and if there are complaints by the Water Department at the time of the complaint.

The water rate structure for the City is set by ordinance and can be found in the table of fees.

The City of Chanute realizes that emphasis must be placed on obtaining accurate measurement of water use at our source and at customer meters and that a water use records system must be in place that can be used to effectively and efficiently manage the City public water distribution system. For that reason, the City of Chanute has chosen the following conservation practices and target dates for the Management component of the Long-Term Water Use Efficiency Section of our Water Conservation Plan.

Management Conservation to be taken:

1. All source water supplies have meters installed and the meters will be repaired or replaced within two weeks when malfunctions occur (implemented).
2. Meters for source water will be tested for accuracy at least once every three years. Each meter will be repaired or replaced if its test measurements are not within industry standards (such as AWWA standards) by 2011.

3. Meters are installed at all service connections (implemented).
4. All meters for source water will be read at least on a monthly basis and meters at individual service connections will be read at least once every two months (implemented).
5. A water utility will implement a water management review, whenever the amount of unsold water (amount of water provided free for public service, used for treatment purposes, water loss, etc.) exceeds 20 percent of the total source water annually. This review will be to determine appropriate actions to reduce the loss of water in a timely fashion (implemented).

Regulation

The City of Chanute does not have any water conservation regulations in effect at the present time. Because of our ability to supply water during normal periods, regulatory controls on water use are included only in the Drought Response section of this plan and water drought/emergency ordinance where they constitute the primary means for conserving water during a supply shortage.

Chanute does have a plumbing code, but has not felt the need to incorporate mandatory use of water conservation units in the plumbing code. The enforcement of any regulations to require use of any water conservation plumbing measures would be very difficult. Most new homes and/or remodeling projects do include the use of water conservation toilets and faucets.

Drought Response

The City of Chanute addresses its short-term water shortage problems through a series, of stages based on conditions of supply and demand with accompanying triggers, goals and actions. Each stage is more stringent in water use than the previous stage since water supply conditions are more deteriorated. In addition, the Kansas Water Office (KWO) and Water Assurance District (WAD) will monitor assurance storage capacities as directed in the operations agreements between the KWO and the WAD. The KWO and WAD will coordinate efforts regarding the need to implement drought contingency plans included in each WAD member's water conservation plan in order to conserve assurance storage capacity. The City Manager is authorized by ordinance to implement the appropriate conservation measures.

Stage 1: Water Watch

Goals

The goals of this stage are to heighten awareness of the public on water conditions and to maintain the integrity of the water supply system.

Triggers

This stage is triggered by any one of the following conditions:

1. Water has stopped flowing over the Neosho River dam at 7th Street;
2. The Kansas Water Office or Water Assurance District has issued a Stage 1 Water Watch (for water marketing customers) based on the remaining water marketing storage in a water marketing lake;

3. The Kansas Water Office or Water Assurance District has issued a water watch based on the remaining water assurance storage in the Water Assurance District lakes.

Education Actions

1. The City will make occasional news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming season.
2. Previous months summaries of precipitation, temperature, water levels and storage will be made public at the beginning of each month
3. Water-saving tips will be included in billings to water utility customers.

Management Actions

1. Leaks will be repaired within 48 hours of detection.
2. The City will monitor its use of water and will curtail activities such as hydrant flushing and street cleaning.

Regulation Actions

The public will be asked to curtail some outdoor water use and to make efficient use of indoor water, i.e. wash full loads, take short showers, don't let faucets run, etc.

Stage 2: Water Warning

Goals

The goals of this stage are to reduce peak demands by 20 percent and to reduce overall weekly consumption by 10 percent.

Triggers

This stage is triggered by any one of the following conditions:

1. Treatment plant operations are at 80 percent capacity or more for three consecutive days;
2. Water is 1 feet below the Neosho River dam at 7th Street;
3. The Kansas Water Office or Water Assurance District has issued a water warning based on the remaining water assurance storage in the Water Assurance District lakes.

Education Actions

1. The City will make weekly news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming week.
2. Previous week summaries of precipitation, temperature, water levels and storage will be made public each week.
3. Water conservation articles will be provided to the local newspaper.
4. Water-saving tips will be included in billings to water utility customers.

Management Actions

1. The City water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. The City will curtail its water usage, including operation of fountains, watering of City grounds and washing of vehicles.
4. Reserve supplies behind the low water dams will be prepared for use.

Regulation Actions

1. An odd/even lawn watering system will be imposed on City residents. Residents with odd-numbered addresses will water on odd days; even addresses will water on even days.
2. Outdoor water use, including lawn watering and car washing will be restricted to before 10:00 am and after 9:00 pm.
3. Golf courses will restrict watering to tees and greens after sunset.
4. Refilling of swimming pools will be allowed one day a week after sunset.
5. Outdoor watering will be restricted to use of a hand-held hose or bucket only.
6. Excess water use charges for usage of water over the amount used in the winter will be considered.
7. Waste of water will be prohibited.

Stage 3: Water Emergency

Goals

The goals of this stage are to reduce peak demands by percent (typically 50) and to reduce overall weekly consumption by percent (typically 25).

Triggers

This stage is triggered by any one of the following conditions:

1. Treatment plant operations are at 90 percent capacity or more for three consecutive days;
2. Water is 2.5 feet below the Neosho River dam at 7th Street;
3. The Kansas Water Office or Water Assurance District has issued a water emergency based on the remaining water assurance storage in the Water Assurance District lakes.
4. Emergency conditions related to repairs or water quality issues have occurred.

Education Actions

1. The City will make daily news releases to the local media describing present conditions and indicating the water supply outlook for the next day.

2. Previous days summaries of precipitation, temperature, water levels and storage will be made public each day.
3. The City will hold public meetings to discuss the emergency, the status of the City water supply and further actions, which need to be taken.

Management Actions

1. The City water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. The City will seek additional emergency supplies from other users, the state or the federal government.

Regulation Actions

1. Outdoor water use will be banned.
2. Waste of water will be prohibited.

PLAN REVISION, MONITORING & EVALUATION

The City of Chanute has established a monthly management practice of reviewing monthly totals for water production, residential/commercial sales, water provided free-of-charge, and “unaccounted for water”. Problems noted during the monthly review will be solved as soon as possible.

The City of Chanute Municipal Water Conservation Plan will be reviewed each year and on a more frequent basis during drought or other water shortage conditions. If the water conservation GPCD goals for the previous year are not met, then the City will review the data collected from the previous year in relationship to the status and effectiveness of the conservation practices that are outlined in our plan and will provide a status report to the Division of Water Resources which will also include any additional water conservation practices that may need to be taken in order for the city to achieve and maintain its water use conservation GPCD goals.