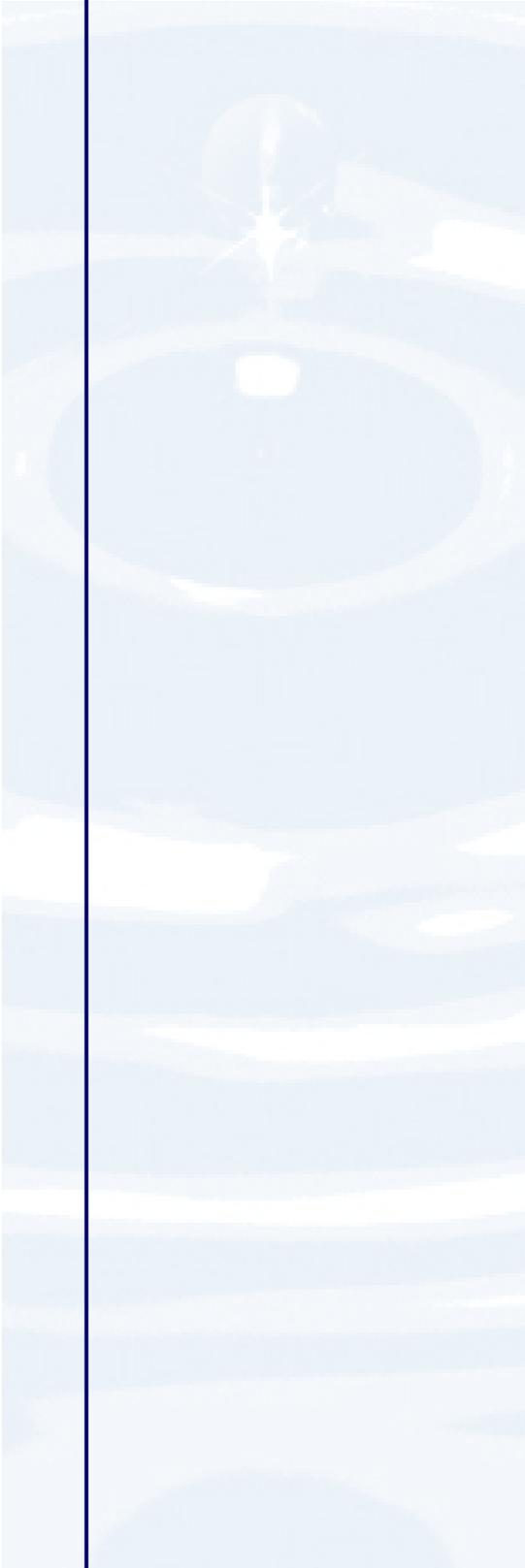




**MUNICIPAL WATER
CONSERVATION PLAN
FOR THE
CITY OF
ST. MARYS**



Municipal Water Conservation Plan For the City of St. Marys

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INTRODUCTION

The primary objectives of the Water Conservation Plan for the City of St. Marys are to develop long-term water conservation plans (Long-Term Water Use Efficiency Section) and short-term water emergency plans (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 St. Marys has undertaken a number of steps to ensure a dependable water supply for our customers during the past 100 years. The water supply for our City is obtained from three wells. These wells were drilled from 1988 to 1993 and take water from the Kansas River Alluvial. All three were completely rebuilt in 1995 to 2000, including new casings and pumps. Treated water storage facilities consist of one 460,000 gallon above-ground level storage tank and one 200,000 gallon elevated tank. Our City water supply and distribution system have ample capacity to meet current customer demands and future projected demands for several years, except during drought periods.

LONG-TERM WATER USE EFFICIENCY

Water Use Conservation Goals

The City of St. Marys used 91 gallons per person per day (GPCD) in 2010. This GPCD figure included:

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

However, the GPCD figure does not include the continuous pumping of the Park Well, which is needed to reduce contaminates, or municipally supplied water for industries that use over 200,000 gallons per year. According to Figure 1, shown in the 2010 Kansas Municipal Water Use Publication, our City is located in Region 7. From this publication it was determined that our City GPCD water use was 91, which was 7 percent below the regional average of 98 GPCD among cities in Region 7 during 2010. The City desires to set a water use conservation goal for usage not to exceed 99 GPCD based on the regional average of the past five years (2006-2010). 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 gallons of water used during the billing period and the amount of the bill. Water conservation tips are not provided with the water bills since the bills are printed on postcards and messages are limited to 15 characters. The City has not provided information on water conservation to the local news media on a regular basis and has not encouraged the Board of Education and teachers to become involved in water conservation presentations in schools.

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 to be Taken	Target Date
1. Water bills will show the amount of water used in gallons and the cost of the water.	Implemented
2. Water bills will be printed on 8.5" x 11" paper, allowing for occasional water conservation messages.	01/01/2014

Management

The City of St. Marys 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 daily.

Water meters were installed for all residential/commercial customers. The amount of water provided free of charge to the city government buildings and grounds is also metered. Customer meters are scheduled for an accuracy check and possible repair or replacement upon receiving a request to do so from the customer.

The City of St. Marys reads each customer's water meter and mails a monthly water bill to each customer every month. Customer water meters are generally read approximately the third week of the month; however, the meter reader sometimes deviates from the scheduled time period.

Water leaks from the City public water distribution system are repaired when customers report significant leaks from the water mains or are located by city personnel. Water pressure is not checked unless customers complain that their water pressure is too low.

The water rate structure for the City was passed in February 2012. The minimum monthly water bill is \$8.10 for city residential customers and \$8.90 for rural customers. Water use is charged at \$2.25 per 1000 gallons per city residential and \$2.50 for rural residential/commercial users. The sewer rate is \$30.50 plus \$2.50 per 1,000 gallon for city residential customers and \$31.70 plus \$3.40 per 1000 gallons for all rural residential/commercial users.

The City of St. Marys realizes that much greater 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 developed that can be used to more effectively and efficiently manage the City public water distribution system. For that reason, the City of St. Marys 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 Practices to be Taken	Target Date
1. All source water will have meters installed and the meters will be repaired or replaced within two weeks or less 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).	Implemented
3. Meters will be installed at all residential service connections and at all other service connections whose annual water use may exceed 300,000 gallons, including separate meters for municipally operated irrigation systems which irrigate more than one acre of turf.	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 monthly.	Implemented
5. A reading will be taken at each source water meter at the same time that meters for individual service connections are read.	Implemented
6. A water utility will implement a water management review, which will result in a specified change in water management practices or implementation of a leak detection and repair program or plan, 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 for a four month time period.	Implemented Water Loss does not exceed 20 percent
7. Water sales will be based on the amount of water used.	Implemented
8. A water rate structure designed to curb excessive use of water will be evaluated.	Implemented

Regulation

The City of St. Marys 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.

St. Marys does have a plumbing code, but has not felt the need to incorporate mandatory use of water conservation units in the plumbing code.

DROUGHT RESPONSE

The City of St. Marys 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 as water supplies deteriorate. The City Commission is authorized by ordinance to implement any or all of the appropriate conservation measures seen in Stages 1, 2, or 3.

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. The City's storage has fallen below 85 percent capacity, and will not recover;
2. Groundwater levels have fallen 5 feet below the normal seasonal level.

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. Water-saving tips will be included in billings to water utility customers.

Management Actions

1. The City wells will be cleaned and flushed as needed to maintain them at their most efficient condition.
2. Leaks will be repaired within 48 hours of detection.
3. 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, by either direct solicitation or via the media, 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. The City's storage has fallen below 70 percent capacity, and will not recover;
2. Pumping lowers water level to within 10 feet of the top of the well screens;
3. Groundwater levels have fallen 10 feet below the normal seasonal level.

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. Pumpage at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. The City will curtail its water usage.
5. Intakes will be adapted to operate with low flows.

Regulation Actions

These regulation actions apply to City customers.

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. Refilling of swimming pools will be allowed one day a week after sunset.
4. Outdoor watering will be restricted to use of a hand-held hose or bucket only.
5. Waste of water will be prohibited.

Stage 3: Water Emergency

Goals

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

Triggers:

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

1. The City's storage has fallen below 50 percent capacity;
2. Pumping lowers water level to within 5 feet of the top of the well screens;
3. Groundwater levels have fallen 15 feet below the normal seasonal level;
4. Emergency conditions related to repairs or water quality.

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. Pumpage at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. The City will seek additional emergency supplies from other users, the state or the federal government.

Regulation Actions

These regulation actions apply to City customers.

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

PLAN REVISION, MONITORING & EVALUATION

The City of St. Marys will establish 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 resolved as soon as possible. Moreover, the City will also review annually the contamination evaluation numbers of Well #5 and the annual numbers from the metering on the "Park Well pump". This review will be done to monitor contaminates and to develop ideas on how to slowly reduce the number of gallons being pumped by the "Park Well".

The City of St. Marys Municipal Water Conservation Plan will be reviewed during the month of April 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 not provide a status report to the DWR 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.

Adopted by the Governing Body of the City of St. Marys, Kansas, on the 16th day of April, 2013.

SEAL:

Mayor

Attested: _____
April Huaracha, City Clerk