

RESOLUTION NO. 052714-5

A RESOLUTION AMENDING THE WATER CONSERVATION PLAN OF THE CITY OF ABILENE, KANSAS

WHEREAS, the City of Abilene is subject to environmental and operational situations whereby water conservation is necessary and prudent;

WHEREAS, the City of Abilene desires to amend its Water Conservation Plan to include input from the Kansas Department of Health and Environment and the Division of Water Resources.

NOW, THEREFORE BE IT RESOLVED, by the City Commission of the City of Abilene, as follows:

Section 1. Water Conservation Plan. That the Water Conservation Plan of the City of Abilene, Kansas, is hereby amended as attached hereto as **Exhibit A**.

Section 2. Implementation. The City Manager, or designee, shall be authorized to implement the aforementioned policy, in cooperation with area partners, as provided therein and in applicable resolutions, ordinances, and laws.

Section 3. Repeal. All former versions of this policy are hereby repealed in their entirety.

Section 3. Effective Date. That the effects of this Resolution shall be in full force after its approval by the City Commission.

PASSED AND APPROVED by the Governing Body of the City of Abilene, Kansas this 27th day of May, 2014.



ATTEST:

Penny Soukup, CMC
Penny Soukup, CMC
City Clerk

CITY OF ABILENE, KANSAS

By: *Brenda Finn Bowers*
Brenda Finn Bowers, Mayor

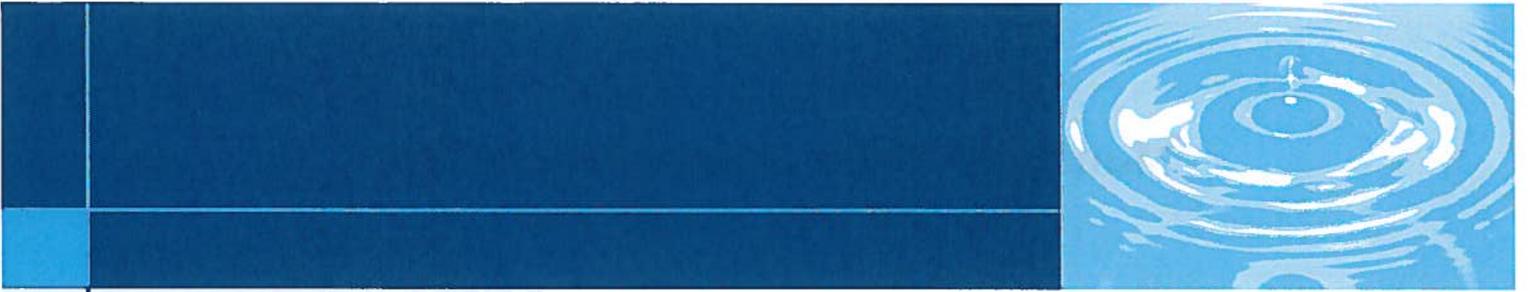
EXHIBIT A

Water Conservation Plan

of the

City of Abilene, Kansas

May 27, 2014



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

Municipal Water Conservation Plan For the City of Abilene

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PLAN REVISION, MONITORING AND EVALUATION

INTRODUCTION

The primary objectives of the Water Conservation Plan for the City of Abilene 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 Abilene has undertaken a number of steps to ensure a dependable water supply. The water supply for our City is obtained from wells drilled in 1945-2014 and take water from the Sand Springs Aquifer and the Smoky Hill River Alluvium. Treated water storage facilities consist of three 500,000 gallon tanks of which two are ground level tanks and one is elevated, plus one 250,000 gallon elevated tank. Our City water supply and distribution system have adequate capacity to meet current customer demands and future projected demands for several years, except during drought periods. The City of Abilene believes that our Municipal Water Conservation Plan represents an additional major step in ensuring our customers of a dependable water supply in future years.

LONG-TERM WATER USE EFFICIENCY

Water Use Conservation Goals

The City of Abilene used 136 gallons per person per day (GPCD) in 2011. This GPCD figure included:

- Water sold to residential/commercial customers;
- Water distributed for free public services (parks, cemeteries, swimming pools 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 2011 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 136, which was 40 percent above the regional average of 98 GPCD among cities in Region 7 during 2011. The City desires to set a water use conservation goal for usage not to exceed 99 GPCD based on the regional average of the last five years (2007-2011). 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 occasionally provided on the water bills. The City has provided information on water conservation to the local news media on a regular basis.

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 show the amount of water used in gallons during this billing period and the number of gallons used last year during the same billing period.	Implemented online thru Payment Service Network, which will be advertised better. October 2014
3. Water conservation tips will be provided occasionally on the monthly water bills during the summer months.	Implemented
4. Water conservation articles or issues will be provided or discussed each month during the summer by the local news media.	Implemented
5. Make available information on water conserving landscape practices through publications, local news media, seminars or other appropriate means.	Implemented

Management

Water meters are installed for all residential/commercial customers, as well as for all water distributed free of charge to city government buildings and grounds.

The City of Abilene reads each customer's water meter and mails a water bill to each customer every month. Customer water meters are generally read approximately the 15th of each month; however, the meter reader sometimes deviates from the scheduled time period.

Water leaks from the City public water distribution system are repaired when discovered and/or reported to 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 on April 14, 2014 effective May 1, 2014. The minimum monthly water bill is \$13.75. Residential water use is charged \$3.25 per 1,000 gallons with a conservation rate of \$6.50 per 1,000 gallons for water used over the winter

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average plus 20%. The rate doubles to \$13.00 per 1,000 for water over the winter average plus 20% during a declared water emergency. Commercial customers are charged \$3.25 per 1,000 gallons for the first 225,000 gallons, and \$2.75 per 1,000 gallon after that. The rate jumps to \$3.00 per 1,000 gallon during a declared water emergency for water used above 225,000 gallons. Customers outside the city limits pay double the rates stated earlier. The Rural Water District #2 wholesale rate is \$1.44 per 1,000 gallons. The sewer rate for all customers passed on January 24, 2011, is \$11.40 minimum plus \$4.75 per 1,000 gallons of winter average use. The City periodically reviews water rates.

The City of Abilene realizes that much greater emphasis must be placed on obtaining accurate measurement of water use at our source and at customer meters. For that reason, the City of Abilene 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 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 at each individual service connection will be replaced or tested for accuracy on a regular basis, per industry standards (such as AWWA standards), if they are one inch or less. Meters between one inch and six inches will be tested for accuracy at least once every five years and meters six inches and above will be tested on at least an annual basis. Each meter will be repaired or replaced if its test measurements are not within industry standards (such as AWWA standards).	Implemented
4. A water rate structure designed to curb excessive use of water will be evaluated.	Implemented
5. Recommend to Community Development Director a program to incorporate water conserving landscape principles into future landscape development projects, including renovation of existing landscapes.	Implemented
6. Encourage the recycling of wastewater for selected industrial or irrigation purposes.	Implemented
7. 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 operation irrigation systems which irrigate more than one acre of turf.	Implemented
8. 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
9. The City of Abilene will implement a water management review, which may result in a specified change in water management practices or implementation of a leak detection and repair program or plan, whenever unaccounted for water exceed 20% of the total source water for a four month time period.	Implemented
10. Water sales will be based on the amount of water used.	Implemented

Regulation

The City of Abilene does have water conservation regulations in effect at the present time. From May 1 to September 30 each year there is a prohibition of outside watering between the hours of noon and 7 p.m. (Ordinance No. 3197, 5/12)

Abilene does have a plumbing code. The enforcement of any regulations to require use of any water conservation plumbing measures is ongoing. Most new homes and/or remodeling projects do include the use of water conservation toilets and faucets.

Regulation Actions to be Taken	Target Date
1. All new or renovated construction will install toilets that use 1.6 gallons per flush or less and low flow showerheads that use 2.5 gallons per minute or less.	(Implemented)
2. Adopt a landscape water conservation ordinance.	October 1, 2014

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2. Adopt a landscape water conservation ordinance.	October 1, 2014

DROUGHT RESPONSE

The City of Abilene 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. 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:

1. Storage fall to or below 70% capacity
2. Demand is in excess of 2.75 million gallons per day for three consecutive days

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. Monthly summaries of precipitation, temperature, water levels in wells will be made public at the beginning of each week.
3. Water-saving tips will shared with water utility customers.

Management Actions

1. Leaks will be repaired as soon as practical upon notification.

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. (City Code 7-1004)

Stage 2: Water Warning

Goals

The goals of this stage are to reduce daily consumption by 30 percent and to reduce overall weekly consumption by 30 percent.

Triggers

This stage is triggered:

1. When Well #1 water level drops to 5 feet.
2. Storage fall to or below 60% capacity
3. Demand is in excess of 3.25 million gallons per day for three consecutive days

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. Bi-monthly summaries of precipitation, temperature, water levels in wells will be made public.
3. Water conservation articles will be provided to the local newspaper.
4. Water-saving tips will be available to water utility customers, online or printed copies are available at City Hall.

Management Actions

1. The City water supplies will be monitored daily.
2. Leaks will be repaired as soon as possible upon notification.
3. Pumping at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. City will contact DWR for permission to require private well owners to comply with the City's drought response regulations as authorized under K.S.A. 82a-733i.

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. Refilling of swimming pools will be allowed one day a week after sunset.
3. Waste of water will be prohibited.

Stage 2: Water Warning

Goals

The goals of this stage are to reduce daily consumption by 30 percent and to reduce overall weekly consumption by 30 percent.

Triggers

This stage is triggered:

1. When Well #1 water level drops to 5 feet.
2. Storage fall to or below 60% capacity
3. Demand is in excess of 3.25 million gallons per day for three consecutive days

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. Bi-monthly summaries of precipitation, temperature, water levels in wells will be made public.
3. Water conservation articles will be provided to the local newspaper.
4. Water-saving tips will be available to water utility customers, online or printed copies are available at City Hall.

Management Actions

1. The City water supplies will be monitored daily.
2. Leaks will be repaired as soon as possible upon notification.
3. Pumping at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. City will contact DWR for permission to require private well owners to comply with the City's drought response regulations as authorized under K.S.A. 82a-733i.

Regulation Actions

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2. Refilling of swimming pools will be allowed one day a week after sunset.
3. Waste of water will be prohibited.

Stage 3: Water Emergency

Goals

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

Triggers:

This stage is triggered:

1. When there is 4.5 feet of water left in Well #1
2. Running peak production reaches 18 hours per day
3. When the average Sand Springs water table falls below 6 feet
4. Storage fall to or below 50% capacity
5. Demand is in excess of 3.75 million gallons per day for three consecutive days
6. Emergency conditions related to repairs or water quality.

Education Actions

1. The City will make news releases as needed to the local media describing present conditions and indicating the water supply outlook.
2. Weekly summaries of precipitation, temperature, water levels in wells will be made public.
3. The City will hold public meetings as needed to discuss the emergency, the status of the City water supply and further actions, which may need to be taken.
4. Water conservation articles will be provided to the local newspaper.
5. Water-saving tips will be available to water utility customers, online or printed copies are available at City Hall.

Management Actions

1. The City water supplies will be monitored daily.
2. Leaks will be repaired as soon as possible upon detection.
3. Pumping at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. The City will consider changing the blend ratio of the water to minimize the strain on the two well fields.
5. The City will begin coordination for emergency supplies from other users, the state or the federal government.

Regulation Actions

These regulation actions apply to City residents (including private domestic well users, if authority is delegated by the Chief Engineer under K.S.A. 82a-733i. The City Manager, or other designated official may, after notice to the citizens of the City of Abilene, designate irrigation schedules or may prohibit outdoor watering completely.

1. Emergency rates are put into effect. The rate doubles to \$13.00 per 1,000 for water over the winter average plus 20%.
2. Outdoor water use will be restricted to one day per week
3. Outdoor watering will be restricted to use of a hand-held hose or bucket only.
4. Waste of water will be prohibited.

An example of a 1 day per week irrigation schedule is:

Irrigation schedules will be based on the last digit of the address:

- 1 – Tuesday
- 2 – Wednesday
- 3 and 4 – Thursday
- 5 and 6 – Friday
- 7 and 8 – Saturday
- 9 and 0 – Sunday

Example – 419 North Broadway will water on Sunday; 601 nw2nd will water on Tuesday;

Other irrigation schedules may be adopted as needed to achieve the goals of this stage

PLAN REVISION, MONITORING & EVALUATION

The City of Abilene 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 solved as soon as possible. The City of Abilene will review and evaluate the GPCD goals to assess further actions and will provide a status report to DWR.

The City of Abilene 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 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.

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