

RESOLUTION NUMBER 012224-2

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; and

WHEREAS, the City of Abilene desires to amend and restate its Water Conservation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF ABILENE, KANSAS:

Section 1. Water Conservation Plan. The Water Conservation Plan of the City of Abilene, Kansas, is hereby amended and restated in the form attached hereto as **Exhibit A**.

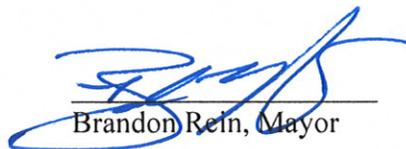
Section 2. Implementation. The City Manager shall be authorized to implement the Water Conservation Plan, in cooperation with area partners, as provided in the plan and in applicable resolutions, ordinances, and laws.

Section 3. Repeal. All former versions of the Water Conservation Plan are hereby repealed in their entirety.

Section 4. Effective Date. This Resolution shall take effect and be in force after its approval by the Governing Body.

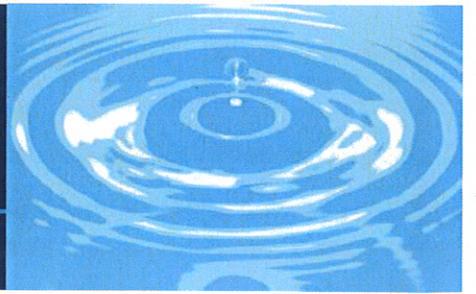
Adopted by the Board of Commissioners and signed by the Mayor this 22nd day

of January, 2024.

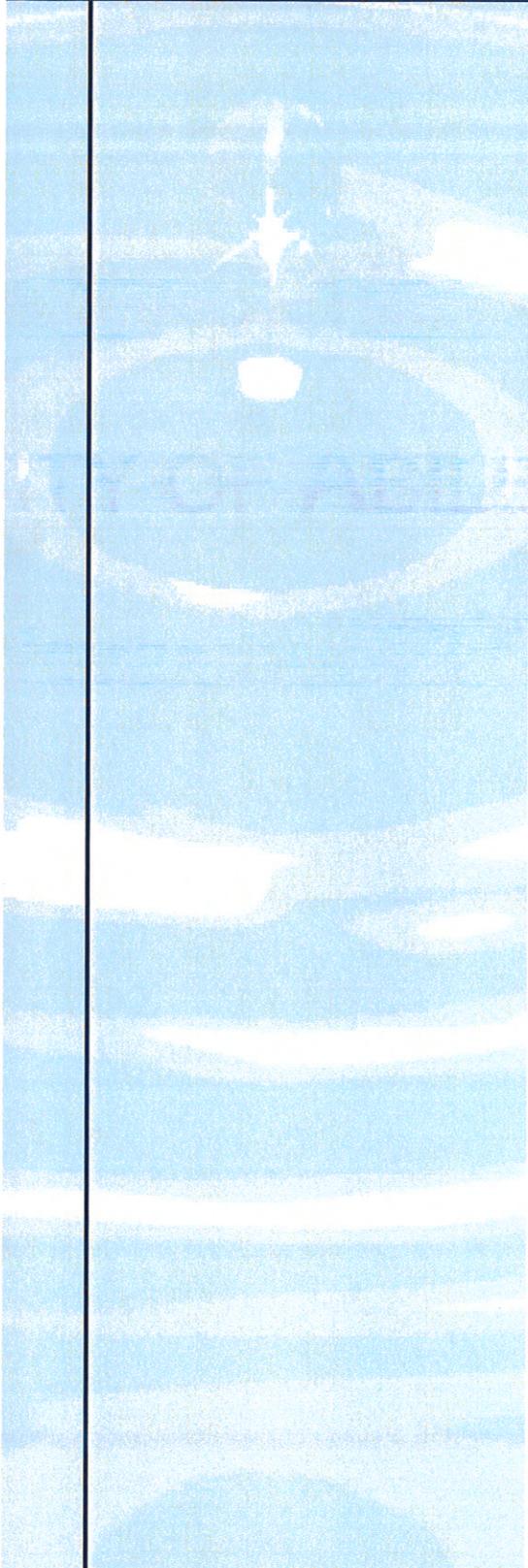


Brandon Rein, Mayor





MUNICIPAL WATER CONSERVATION PLAN CITY OF ABILENE November 2023



Adopted January 22, 2024, Resolution 012224-2

Municipal Water Conservation Plan for the City of Abilene

TABLE OF CONTENTS

INTRODUCTION	3
DEFINITIONS.....	3
LONG TERM WATER USE EFFICIENCY.....	3-6
Water Use Conservation Goals.....	3
Water Conservation Practices.....	4
Education	4
Management.....	4
Regulation	6
DROUGHT RESPONSE.....	7-12
Stage 1: Water Watch	7
Stage 2: Water Warning	9
Stage 3: Water Emergency	11
PLAN REVISION, MONITORING AND EVALUATION.....	13

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 several steps to ensure a dependable water supply. The water supply for our city is obtained from wells drilled in 1945-2022 and takes 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. The City of Abilene believes that our Municipal Water Conservation Plan represents a major step in ensuring our customers have a dependable water supply in future years.

Definitions

Aquifer is a body of permeable rock which can contain/transmit groundwater.

Alluvium is a deposit of clay, silt, sand, and gravel left by flowing streams in a river valley.

LONG-TERM WATER USE EFFICIENCY

Water Use Conservation Goals

The City of Abilene used 92 gallons per person per day (GPCD) in 2017. This GPCD figure includes:

- Water sold to residential/commercial customers.
- Water distributed for free for public services (parks, cemeteries, swimming pools, etc.)
- 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 the publication Municipal Water Use in Kansas, 2017, our city is in Region 7M. From this publication, it was determined that our City's GPCD water use was 160, which was 74 percent above the regional average of 92 GPCD among public water suppliers in Region 7M in 2017. The City desires to set a water use conservation goal for usage not to exceed 92 GPCD based on the regional average from 2013 to 2017. Our City anticipates not exceeding this goal by carrying out the specific actions 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. 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 conservation tips can be attained on the city's website.	Implemented
3. Educational materials to teach customers how to read their water bills.	December 2024

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 read on the 15th of each month.

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 and sewer rate structure for the city was passed on January 2024 effective February 1, 2024. The minimum monthly connection charge is \$18.77 for Residential and Commercial. Residential water use is charged at a rate of \$0.447 per 100 gallons. Commercial customers are charged at a rate of \$0.447 per 100 gallons for the first 225,000 gallons and \$0.379 per 100 gallons above 225,000 gallons. Customers outside the city limits pay double the rates stated earlier. During a declared water emergency, the governing body shall have the power to adopt emergency water rates by ordinance, pursuant to Section 7-1006 of the city code. The Dickinson County Rural Water District #2 wholesale rate is \$1.48 per 1,000 gallons. The sewer minimum monthly connection charge for all customers is \$15.30 plus \$0.644 per 100 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 90 days when malfunctions occur.	(Implemented)
2. Meters for source water will be tested for accuracy at least once every five years. Each meter will be repaired or replaced if its test measurements are not within KDA requirements.	(Implemented)
3. Meters at each individual service connection will be replaced or tested for accuracy upon customers request and/or suspected failure if they are one inch or less. Meters over one inch will be tested for accuracy at least once every five years. Each meter will be repaired or replaced if its test measurements are not within AWWA standards of 95%-101%.	(Implemented)
4. A water rate structure designed to curb excessive use of water will be evaluated.	(Implemented)
5. Recommend to City Manager a program to incorporate water conserving landscape principles into future landscape development projects, including renovation of existing landscapes.	(Implemented)
6. Meters will be installed at all residential/commercial service connections and at all other service connections, including separate meters for irrigation systems which irrigate more than one acre.	(Implemented)
7. The city 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 plan. Whenever the amount of unsold water, water provided free for public service, water loss, etc. exceeds 20 percent or water loss at the R.O. Water Treatment Plant exceeds 25 percent of the total source water for a four-month time period.	(Implemented)
8. Water sales will be based on the amount of water used.	(Implemented)

Regulation

The City of Abilene does encourage water conservation from May 1 to September 30 each year between the hours of noon and 7 p.m.

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, washing machines 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.	May 2026
2. Adopt a landscape water conservation ordinance.	May 2026

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 to implement the Water Conservation Plan (Resolution # 012224-1). In times of need or duress, the governing body may declare any section of the program.

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 one of the following conditions:

1. Water production capacity is only 10% greater than projected daily demand.
2. If the availability of water storage is reduced by any one water tower during summer usage only. This does not apply to spring, fall, and winter.
3. Water tower storage falls below 60% of maximum.

Education Actions

1. The city will make bi-weekly news releases to the local media and post on the city website describing present conditions and indicating the water supply outlook for the upcoming season.
2. Bi-weekly summaries of precipitation, temperature, water levels in wells will be made public at the beginning of each month.
3. Water-saving tips will be shared with water utility customers.

Management Actions

1. Leaks will be repaired as soon as practical upon discovery.
2. Water tower draining or flushing will be suspended.
3. The city will suspend washing of the city fleet, hydrant flushing, and water tower draining and flushing for inspection.

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, do not 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.

Triggers

This stage is triggered by one of the following conditions:

1. Whenever the Governing Body finds that drought conditions or some other condition causing a major water supply shortage are present and supplies are starting to decline, it shall be empowered to declare, by resolution, that a Water Warning exists and that it will recommend restrictions on non-essential uses during the period of the Water Warning.
2. Water production capacity is equal to projected daily demand.
3. Two water towers are out of service regardless of season.
4. Water tower storage falls below 50% of maximum.

Education Actions

1. The City will make weekly news releases to the local media and post on the city website describing present conditions and indicating the water supply outlook for the upcoming weeks.
2. Weekly summaries of precipitation, temperature, water levels in wells will be made public.
3. Water conservation articles will be provided to the local newspaper and posted on the city website.
4. Water-saving tips will be available to water utility customers, online or printed copies are available at City Hall.

Management Actions

1. Upon declaration of a Water warning, the City Manager, or other designated official, is also authorized to implement certain mandatory conservation measures, including, but not limited to, the following.
 - a. The price is doubled for new connections to the city's water distribution system, except connections of fire hydrants and those made pursuant to agreements entered by the City prior to the effective date of the declaration of the water warning.

- b. The imposition of water rationing based on any reasonable formula including, but not limited to, the percentage of normal use and per capita or per customer restrictions.
 - c. Complete ban on the waste of water. As defined in city code 7-1002 (c,1,2)
 - d. Any combination of the measures in Sections 7-1005 of the City Code as the Governing Body, or authorized City official, may deem appropriate and/or necessary.
- 2. The city water supplies will be monitored daily.
 - 3. Leaks will be repaired as soon as possible upon notification.
 - 4. Pumping at wells will be reduced to decrease drawdown and to maintain water levels over well screens.

Regulation Actions

- 1. Upon declaration of a Water Warning, the City Manager, or other designated official, is also authorized to implement certain mandatory conservation measures, including, but not limited to the following.
 - a. The city will suspend washing of the City Fleet, hydrant flushing, and Water Tower draining and flushing for inspection.
 - b. Restrictions on the uses of water in one or more classes of water use, as defined in Section 7-1002(d) of the City Code, wholly or in part.
 - c. The imposition of water rationing based on any reasonable formula including, but not limited to, the percentage of normal use and per capita or per customer restrictions.
 - d. Complete ban on the waste of water.
 - e. Any combination of the measures in Sections 7-1005 of the City Code as the Governing Body, or authorized City official, may deem appropriate and/or necessary.
 - f. 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, do not let faucets run, etc. (City Code 7- 1004)

Stage 3: Water Emergency

Goals

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

Triggers:

This stage is triggered by one of the following conditions:

1. Whenever the Governing Body finds that an emergency exists by reason of a shortage of water supply needed for essential uses, it shall be empowered to declare, by resolution, that a Water Emergency exists and that it will impose mandatory restrictions on water use during the period of the Water Emergency.
2. Production capacity is less than daily projected demand.
3. Three or more water towers are out of service regardless of season.
4. Water tower storage falls below 35% maximum.
5. Blend ratio outside 10% of nominal set points
6. Water table falls to historic lows references 2012 water table level.

Education Actions

1. The city will make news releases as needed to the local media and post on the city website 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 and posted on the city website.
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 regulations apply to city residents.

1. Upon declaration of a Water Emergency as provided in Section 7-1003(c) of the City Code, the City Manager, or other designated official, is also authorized to implement certain mandatory conservation measures, including, but not limited to, the following:
 - a. Suspension of new connections to the city's water distribution system, except connections of fire hydrants and those made pursuant to agreements entered by the city prior to the effective date of the declaration of the emergency.
 - b. The city will suspend washing of the city fleet, hydrant flushing, and Water Tower draining and flushing for inspection.
 - c. Restrictions on the uses of water in one or more classes of water use, as defined in Section 7-1002(d) of the City Code, wholly or in part.
 - d. The imposition of water rationing based on any reasonable formula including, but not limited to, the percentage of normal use and per capita or per customer restrictions.
 - e. Complete ban on the waste of water.
 - f. Any combination of the measures in Sections 7-1005 of the City Code as the Governing Body, or authorized City official, may deem appropriate and/or necessary.
2. Upon the declaration of a Water Emergency as provided in Section 7-1003(c) of the City Code, the Governing Body shall have the power to adopt emergency water rates by ordinance designed to conserve water supplies. Such emergency rates may provide for, but are not limited to:
 - a. Higher charges for increasing usage per unit of use (increasing block rates).
 - b. Uniform charges for water use per unit of use (uniform unit rate).
 - c. Extra charges in excess of a specified level of water use (excess demand surcharge).

PLAN REVISION, MONITORING & EVALUATION

- 1. 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. The problems noted during the monthly review will be solved as soon as possible.
- 2. The City of Abilene will review and evaluate the GPCD goals to assess further actions and will provide a status report to the Kansas Department of Agriculture-Division of Water Resources (DWR).



Brandon Rein, Mayor

Attest:



Shayla L. Mohr, CMC, City Clerk

Date signed: January 22, 2024