

**RESOLUTION NUMBER 051120-1**

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 Repeal.** All former versions of the Water Conservation Plan are hereby repealed in their entirety.

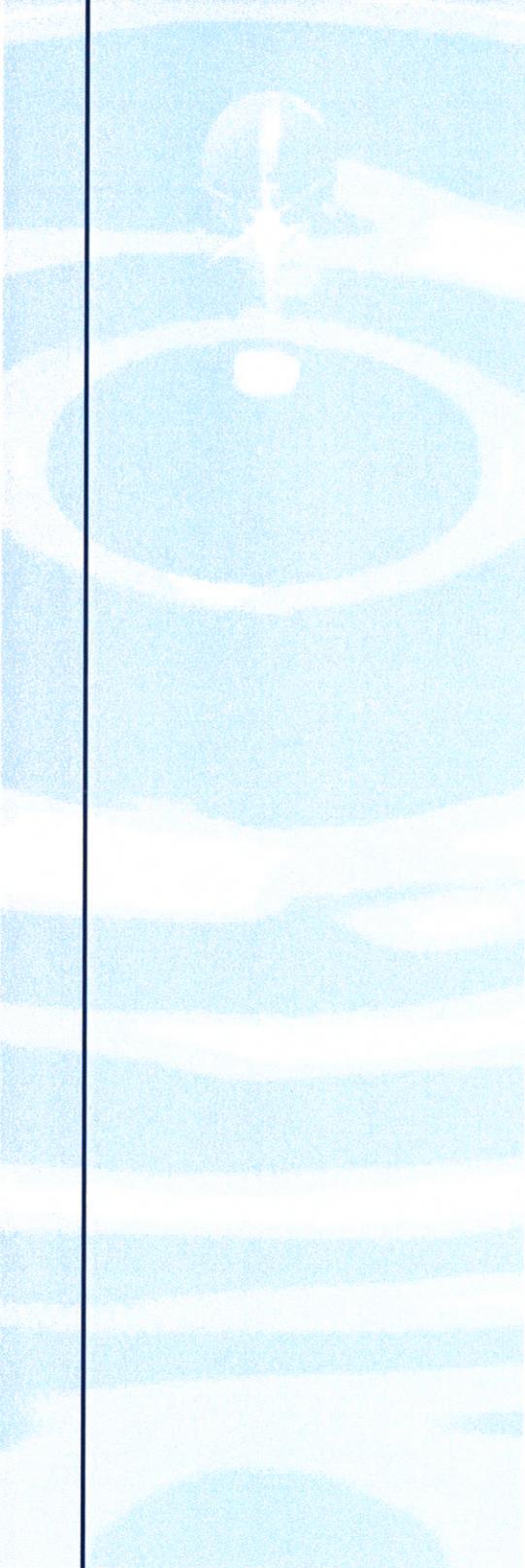
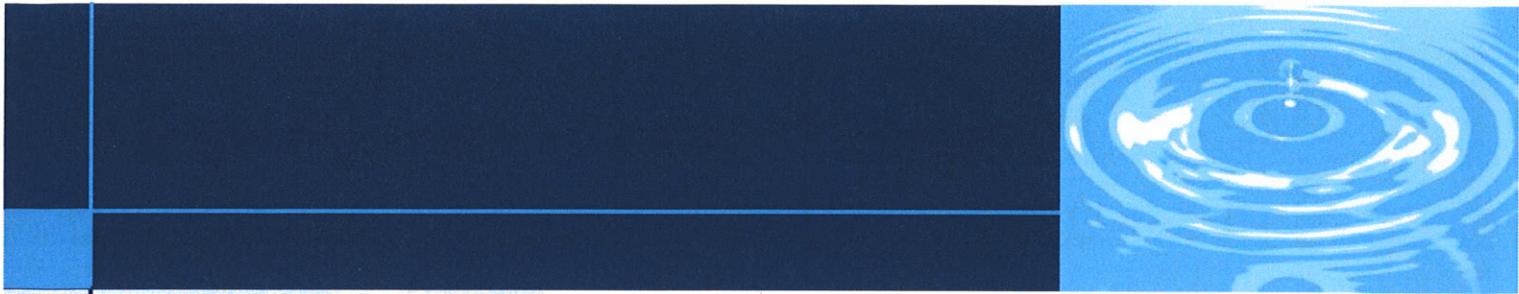
**Section 4. Effective Date.** This Resolution shall take effect and be in force after its approval by the Governing Body.

Adopted by the Board of Commissioners and signed by the Mayor this 11<sup>th</sup> day of May, 2020.



  
Chris Ostermann, Mayor

  
Penny L. Soukup, CMC, City Clerk



**MUNICIPAL WATER  
CONSERVATION PLAN  
CITY OF ABILENE  
MAY 7, 2020**

# Municipal Water Conservation Plan For the City of Abilene

## TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>3</b>
<b>LONG TERM WATER USE EFFICIENCY.....</b>	<b>3</b>
Water Use Conservation Goals.....	3
Water Conservation Practices.....	4
Education .....	4
Management.....	4
Regulation .....	6
<b>DROUGHT RESPONSE.....</b>	<b>7</b>
Stage 1: Water Watch .....	7
Stage 2: Water Warning .....	8
Stage 3: Water Emergency .....	10
<b>PLAN REVISION, MONITORING AND EVALUATION.....</b>	<b>12</b>

## 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 1945-2015 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. 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 160 gallons per person per day (GPCD) in 2017. This GPCD figure included:

1. Water sold to residential/commercial customers.
2. Water distributed for free public services (parks, cemeteries, swimming pools etc.)
3. 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 2017 Kansas Municipal Water Use Publication, our City is in Region 7M. From this publication it was determined that our City GPCD water use was 160, which was 74 percent above the regional average of 92 GPCD among cities in Region 7M during 2017. The City desires to set a water use conservation goal for usage not to exceed 97 GPCD based on the regional average of the last five years (2013-2017). 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. 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 in 2013 and ongoing

### Management

1. 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)
2. 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 month. (Implemented).
3. 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)
4. Water sales will be based on the amount of water used (Implemented)

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 15<sup>th</sup> of each month; however, the meter reading system 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 OCT 2019 effective Nov 2019. The minimum monthly water charge is \$16.12. Residential and Commercial water use is charged \$3.81 per 1,000 gallons Commercial customers are charged \$3.22 per 1000 gallons over 225,000 gallons, gallon during a declared water emergency for water used above 225,000. 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 Nov 2019, is \$13.00 minimum plus \$5.42 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 five 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 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 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 City Manager 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 owned irrigation systems which irrigate more than one acre.	(Implemented)
8. 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	(Implemented)

(amounts of water provided free for public service, water loss, etc.) exceeds 20 percent and water loss at the R.O. Water Treatment plant exceeds 25 percent of the total source water for a four-month time period.	
9. 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, 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.	(Implemented)
2. Adopt a landscape water conservation ordinance.	(Implement late 2020)

## **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 by one of the following conditions:

1. Water production capacity is less than 20% greater than projected daily demand
2. 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 occasional news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming season.
2. Weekly summaries of precipitation, temperature, water levels in wells will be made public at the beginning of each week.
3. Water-saving tips will be 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 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 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. 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 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. 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 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 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.

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 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 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 services 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 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.
6. City will contact DWR for permission to restrict private well use to comply with The City's drought response regulations as authorized under K.S.A. 82a-733i.

### **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.

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 into 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); or
- c. Extra charges in excess of a specified level of water use (excess demand surcharge).

### 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.



Chris Drewmann  
(Mayor's Signature)

Attest:

Penny L. Sunkup  
(City Clerk's Signature)