



# **WATER CONSERVATION PLAN**

## **City of Olathe, Kansas**

*(updated March 2006)*

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## **Background Information**

### **Role of the Kansas Water Office**

Under laws passed in 1986, certain water users are required to prepare water conservation plans. As a member of the Kansas River Water Assurance District, the City of Olathe is required to have a water conservation plan approved by the State. The Kansas Water Office is the state agency directed to develop and maintain water conservation guidelines with approval by the Kansas Water Authority. The following Water Conservation Plan for the City of Olathe was revised in 2006 in accordance with the Municipal Water Conservation Plan Guidelines published by the Kansas Water Office in November 1990. The document presents procedures for developing conservation plans and drought contingency plans. According to the guidelines, each municipal water conservation plan shall contain, at a minimum, the following four sections: (1) Introduction, (2) Long-Term Water Use Efficiency, (3) Drought/Emergency Contingency, and (4) Monitoring, Evaluation, and Revision. In addition, municipal water utilities must include a Water Drought/Emergency Ordinance as an appendix in their plans.

Although the terms “conservation plans” and “drought contingency plans” are frequently used synonymously, the Water Office has made a distinction between the two. For its purposes, water conservation measures are those which "reduce demand for water, improve efficiency in water use, and reduce water losses and waste." Hence water conservation measures are used on a continuous basis to promote overall water use efficiency. Drought contingency measures are "temporary, short-term water conservation methods or techniques designed to be used only as long as a drought emergency exists."

### **Importance of Water Conservation**

Historically, water conservation measures have typically been invoked only during times of drought or other emergency water shortage. However, this view of conservation's role is rapidly changing, and like many public water suppliers, the City of Olathe is looking to conservation as a viable long-term supply option, helping to avert water and wastewater system expansions, resulting in a significant savings in capital and operating costs. Ultimately, water conservation must be a shared responsibility between the City and all citizens of Olathe.

In addition, when droughts occur, short-term demand reduction measures can be implemented in addition to public information campaigns to achieve further reductions in water use. Drought is a recurrent feature of the climate in Kansas. In the last 100 years, there have been five major and numerous minor drought episodes that have plagued the state. The drought of record occurred between 1952 and 1957. More recent droughts have occurred in 1988, 1989 and 1991. (Source: Kansas Water Office)

Water-use efficiency in the United States may be required in coming years by federal water conservation planning guidelines that USEPA established for water utilities in 1998. Development of these guidelines was required by the 1996 amendments to the Safe Drinking Water Act to help integrate conservation into water utilities capital facility planning.

**Benefits of Water Conservation Planning:**

1. Enable the City to ensure adequate quantities of high quality water for the citizens of Olathe.
2. Allow the City to maintain an adequate supply of water for essential personal, commercial, and industrial needs, as well as a sufficient supply for life safety and fire fighting.
3. Extend the availability of water storage capacity in Tuttle Creek, Milford, and Perry Reservoirs, especially during periods of drought.
4. Postpone distribution system improvements and help to stabilize customers' water rates.
5. Avoid or defer capital facility expansion plans and costs for water and wastewater facilities.
6. Reduce environmental impact (i.e., instream flows, groundwater overpumping, effects on wetlands).
7. Increase community involvement in conservation program implementation, contributing to greater program success.

## **Introduction**

### **Population & Projected Growth**

Olathe, Kansas is located in Johnson County in the northeast part of the state. Olathe's population has grown from 61,000 (1990 estimate) to over 115,000 (2005 estimate). The water utility is municipally-owned and operated as a Division of the City's Municipal Services Department. It currently serves approximately 33,262 single-family, multi-family, commercial and industrial customers. Part of the City's population is served by WaterOne of Johnson County. The population of the area served by the City's water utility is projected to reach 144,665 by the year 2020 (source – Mid-America Regional Council). In 2005, service connections number approximately 33,128, with roughly 450 new connections added annually.

### **Water Supply**

The city obtains raw water from two sources: Olathe Lake and the Kansas River.

Water Treatment Plant No. 1 obtains surface water from Olathe Lake, and has a design treatment capacity of 4.0 MGD. Olathe Lake was constructed in January 1955 as a water supply for the city of Olathe. The original Olathe Lake (now called Cedar Lake) in the upper part of the watershed was discontinued as a water supply reservoir because sediment deposition reduced the usable storage volume.

Water Treatment Plant No. 2 obtains its raw water from alluvial wells located along the Kansas River. This plant has a firm water treatment capacity of 36 MGD. The main source of flow for the Kansas River is supplied from Tuttle Creek, Milford, and Perry Reservoirs.

A third source of finished water is available from WaterOne, on an emergency basis only, when WaterOne has surplus capacity available.

### **Water Usage**

Maximum daily usage was 27.11 million gallons on August 9, 2003. Average daily usage in 2005 was approximately 13.18 million gallons.

In 2005, the City supplied over 4.76 billion gallons of drinking water to Olathe residential, commercial and wholesale customers. Of this, approximately 99 percent was supplied by Water Treatment Plant No. 1 and Water Treatment Plant No. 2, and the remaining 1 percent was purchased from WaterOne.

## **Supply Management**

The City of Olathe has taken several measures to ensure Olathe's citizens have an uninterrupted, adequate and safe supply of drinking water, including the following:

- Participation in the formation of Kansas River Water Assurance District No.1 that will allow for storage releases from Tuttle Creek, Milford, and Perry Reservoirs during low river flows.
- Construction in 2002 of a second (7 MGD) Kansas River alluvial collector well (CW2).
- Development of a water system expansion plan involving phased expansion of the treatment capacity at Water Plant No. 2.
- Construction in 2004 of a third (5 MGD) Kansas River alluvial collector well (CW3).
- Construction in 2005 of a fourth (5 MGD) Kansas River alluvial collector well (CW4).
- Construction of a new 42-inch transmission main from Water Plant No. 2 to the distribution system in 2007.
- Construction of new water mains to improve fire flow support to the southeast corner of the City of Olathe.
- Projected construction of a fifth Kansas River alluvial collector well by 2011 (CW5).

The primary objective of the City's Water Conservation Plan is to achieve more efficient use of the State's limited water resources by:

- Encouraging wise water use through a conservation rate structure;
- Monitoring water loss records so remedial actions can be taken;
- Educating customers about efficient water use;
- Monitoring and implementing water use strategies to ensure a sufficient water supply for health, safety and public welfare.

## **Long-Term Water Use Efficiency**

### **Water Use Conservation Goals**

The *2003 Kansas Municipalities Water Use Report*<sup>1</sup> indicates that the City of Olathe is located in Region 8 and is defined as a large public water supply. Table 12 on page 29 of the report indicates that the City has a usage of 111 gallons per capita per day (gpcd), which is 13% lower than the average usage of its peers in Region 8. Region 8 includes nine municipal water utilities throughout a two-county-wide band along the eastern portion of Kansas. The gpcd figure is according to the methods determined by the Division of Water Resources (DWR) in their annual report, and includes a) water sold to residential/commercial customers; b) water distributed for free public services such as parks, cemeteries, swimming pools, etc.; and c) water lost by leaks in the distribution system. The gpcd figure does not include municipally-supplied industrial water for industries that use over 1,000,000 gallons per year or water sold to wholesale customers. Table 12 also shows that the “unaccounted for” water, water withdrawn but not delivered to customers, for the City of Olathe was 12%, slightly above the average for Region 8.

According to the City’s calculations, residential per capita use was 126 gpcd in 2002 and 122 gpcd in 2003. The City of Olathe desires to set a water conservation goal of 140 gpcd, which is within 25% of the regional average for cities in Region 8. The City anticipates meeting this goal by carrying out the specific conservation practices that are outlined in this plan.

### **Water Conservation Practices**

The City’s conservation practices include actions that will reduce overall demand for water, diminish water usage at peak load, improve efficiency in water use, and reduce water losses and waste. 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 of Olathe. Specific practices to conserve water are listed, and a target date to begin each practice is also shown.

### **Summary of Current and Future Education Efforts**

The City has taken a proactive approach to increasing awareness about water conservation throughout the Olathe community. Educational materials covering a variety of related topics associated with water conservation are distributed through the following outlets: direct mail, newsletters, website, Channel 7, customer service window for bill payment, and area schools. Water conservation tips are made available during the summer months on the City’s website and on the local cable access channel bulletin

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<sup>1</sup> *2003 Kansas Municipalities Water Use Report*, published by the Kansas Department of Agriculture (Division of Water Resources), the Kansas Water Office and the U.S. Geological Survey (Water Resources Division).

board. Occasionally, the City will prepare special targeted direct mailings for water customers with inordinately high water use during the summer months, with an emphasis on ways households can improve the efficiency in their outdoor water usage without compromising an attractive landscape. In addition to issuing news releases to the local media during the hot, dry summer months, water conservation articles are included in the City's newsletter that is mailed six times a year to all Olathe residents.

The City relies heavily on the Johnson County K-State Research and Extension office for communicating information on water conservation landscape practices to residents. Pamphlets published by the K-State Research & Extension office containing information on water conservation landscaping are made available on the City's website, and at the customer service window for utility bill payment. Residents are encouraged to contact the local extension office for additional information regarding xeriscaping and turf maintenance.

The City actively pursues relationships with local schools, looking for ways to collaborate with students and teachers on activities surrounding water conservation education. On occasions, the City has provided scholarships for teachers of the Olathe School District to attend Project WET (Water Education for Teachers) training. Educational videos were provided to the 3<sup>rd</sup> grade teachers of the Olathe School District to enhance their curriculum unit on drinking water and water conservation.

The City has established the following conservation practices and target dates for the Education Component of the Long-Term Water Use Efficiency Section of this Water Conservation Plan:

Education Conservation Practices to be Taken	Target Date
1. The City provides scholarships for Olathe School District teachers to attend a 12-hour workshop for "Project WET" and "Wet in the City", where they will learn hands-on activities to use in their classrooms to help teach students about water resources and water conservation.	Initiated in Summer 2003
2. The City established a xeriscape demonstration garden around the Olathe Municipal Services Building, illustrating how various water conservation landscape practices can be utilized in the development of residential and commercial landscapes. The garden incorporates low water demand grasses, flowers and shrubs; a limited turf area; and the use of mulch and compost to improve the soil and retain moisture.	Initiated in Summer 2003
3. The City of Olathe hosts an annual water festival with educational displays on water conservation.	Initiated in Fall 2002

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|---|--------------------------|
| 4. The City coordinates with the Olathe School District administrators to develop classroom activities and implement demonstration projects that involve learning about water conservation. | Initiated in Summer 2000 |
| 5. The City distributes water conservation information throughout select grade school classrooms.   | Ongoing                  |

***Summary of Current and Future Management Efforts***

The City of Olathe has water meters on all raw water supplies and water pumped to the distribution system. Any new supply will have an individual meter on each source of supply. The raw water meters are checked for accuracy whenever the Water Superintendent believes the meters are not operating correctly.

Raw water meter readings for Water Treatment Plant No. 1, Water Treatment Plant No. 2 and horizontal collector wells 1-4 are shown on the SCADA (supervisory control and data acquisition) on a daily basis. Vertical well meter readings are read once a week and service connections are read once a month.

Mag-meters that measure raw water flow for horizontal collector wells 1-4, Water Treatment Plant No. 1 and Water Treatment Plant No. 2 are tested for accuracy at a minimum once every two years. The vertical well raw water meters are tested for accuracy every three years. Each meter is repaired or replaced if its test measurements are not within two percent of the actual volume of water passing through the meter. All raw water meters, which include the vertical wells 1-11, horizontal collector wells 1-4, Water Treatment Plant No. 1 and Water Treatment Plant No. 2, are repaired or replaced within two weeks when malfunctions occur.

All residential/commercial customers have water meters installed. 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 Olathe reads each residential customer's water meter monthly and mails a monthly water bill to each customer.

The City's water distribution system is divided into two pressure zones. The pressure zones have been established to provide adequate water pressure to customers throughout Olathe. Water pressure is monitored daily at each of the City's treatment and pumping facilities. Water pressure at the customer's premises is checked at the customer's request.

The City's water utility completes an annual water management review to ensure unaccounted for water is held to less than 15 percent of raw water pumpage. Unaccounted for water includes non-metered use due to leakage from mains, unregistered customer meters, various uses such as city facilities, fire fighting, fire sprinkler system testing, main flushing, recreational activities and evaporation from the

water treatment plant lime residual settling ponds. Leak correlation and detection crews systematically survey the distribution system. Water leaks from the city public water distribution systems are repaired when customers report leaks from the water mains or when leaks are located by city personnel. Leak detection crews survey distribution system hydrants and valves to ensure operational readiness and repair leaks as necessary.

The current water rates structure for the city was adopted in January 2006. Water sales are based on the actual amount of water used. Residential water user rates are structured around an inverted (inclining) block rate schedule, wherein block rates increase with water consumption. This is based on the number of cubic feet of water used. Commercial and industrial customers are also charged on an inverted block rate structure, which is based on a percentage of their average winter usage. Water customers outside the city limits are charged at rates 25 percent above those within the city. Block rates are reviewed and updated annually. In 2006, water rates were increased by three percent.

The City of Olathe 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:

<u>Management Conservation Practices</u>	<u>Target Date</u>
1. The City developed a program to incorporate water conserving design and management principles (i.e., xeriscaping) into the Unified Development Ordinance requirements for future development projects, including renovation of existing landscapes.	Initiated in Summer 2003
2. The City conducts audits on the water used to irrigate City parks and facility grounds to review for opportunities to reduce outdoor water use.	Initiated in Summer 2003
3. The City engages in partnerships with local schools and other community organizations to review water use records and pursue opportunities to lower outdoor water usage.	Initiated in Summer 2003

***Regulation***

This document replaces the previously approved Water Conservation Plan. Because of the City’s ability to supply water during normal periods, regulatory controls on water use are included only in the Drought/Emergency Contingency section of this plan and Water Drought/Emergency Ordinance where they constitute the primary means for conserving water during a supply emergency.

## **Drought/Emergency Contingency Plan**

The City of Olathe addresses water shortage issues through the Drought/Emergency Contingency Plan. The water shortage may be the result of a drought, unusual demand, or a system failure. A drought may deplete the available water supply or place stress on the City's ability to deliver water and unanticipated demands could exceed plant treatment capacity. A system failure could occur that would threaten the City's ability to deliver water to the entire service area. An ordinance establishing emergency regulations on restricting water use was adopted in June 1988, and was revised in May 2003, for the City to use in dealing with these issues. Based upon experience in summer of 2003, additional revisions to the ordinance were made in April 2004 (Appendix A).

The Drought/Emergency Ordinance applies to all persons, customers, and property served by the City of Olathe. All entities that purchase water from the City of Olathe will be required to follow the same reductions in water use as the City of Olathe.

The City of Olathe's Water Conservation Plan is implemented in three stages. The stages are: 1) "Water Watch", 2) "Water Warning", and 3) "Water Emergency". Each stage is more restrictive in water use than the stage before it, since water supply conditions have deteriorated. Each stage in the plan is accompanied by (a) triggers, which signal the start of a given stage, (b) goals, or desired outcomes, and (c) specific conservation actions in the areas of education, management and regulation.

The City Manager is authorized by ordinance to implement the appropriate conservation measures. Any of the following conditions may be adjusted to reflect changes in the water system at the discretion of the City Manager.

### **Stage 1: WATER WATCH**

Conditions indicate that the probability of a water shortage is rising and steps should be taken to inform customers and ask for voluntary reductions in water use. No serious threat to water supplies is eminent, but the City is watching the water supply situation.

#### Triggers:

A "**Water Watch**" is in effect when a combination of two or more of the following conditions occurs:

1. Daily water demand for 3 consecutive days is in excess of 90% of the available yield from all sources.
2. Daily water demand for 3 consecutive days is in excess of 90% of the treatment capacity of all treatment facilities.
3. Total system storage does not recover above 80% prior to 5 a.m.
4. The Governor declares a "Drought Watch" for Johnson County, contingent upon the extended forecast for temperature and rainfall.

## Goals:

The goals of this stage are:

- To heighten public awareness of water conditions
- To ask for voluntary reductions in outdoor water use to avoid having to implement mandatory restrictions
- To maintain the integrity of the City's water supply system to ensure essential water needs, including life safety and fire suppression.

## Education Actions:

1. The City will provide educational information to water customers about ways to conserve water using the following outlets: direct mail, news releases, Olathe Link "Earth News", Channel 7, and the City's website.
2. The City will make weekly news releases to the local media describing present conditions and indicating the water supply outlook for the upcoming week, asking customers for voluntary water conservation measures.
3. The City will post "Water Watch" information on the City's website and on Channel 7.

## Management Actions:

1. System pressure will be maintained within normal operating pressure ranges.
2. The City will monitor its use of water and will reduce activities such as hydrant flushing and street cleaning.
3. The City will suspend or reduce outdoor watering of landscaping on medians and at City facilities to conserve water.
4. System water demand will be satisfied by the capacity of all treatment facilities.

## Regulation Actions:

The City actively promotes water conservation year-round, particularly during the summer months, when outdoor water use for lawn and landscape watering accounts for as much as 70 percent of the water delivered to households. When conditions require a reduction in water demands to avoid implementing mandatory restrictions, customers will be urged to reduce outdoor water use. When it is first recognized that a water supply problem is developing, the following voluntary water conservation measures will be requested:

- (a) Voluntarily implement an alternate day (odd/even) schedule for outdoor watering.
- (b) Limit nonessential outdoor water use and implement wise outdoor watering.
- (c) Water between 6 p.m. and 6 a.m.
- (d) Limit, or eliminate, outdoor water use on weekends.
- (e) Use a soaker hose to apply water efficiently to plants.
- (f) Limit car washing at home or use a commercial carwash that recycles water.
- (g) Avoid hosing down outside areas such as sidewalks, patios and driveways.

## Requirements for Termination of WATER WATCH:

The “Water Watch” will be terminated when the triggering events have ceased to exist, but the City will continue to promote wise outdoor watering throughout the summer months.

When conditions are such that more stringent conservation measures are required, a “Water Warning” shall be declared and mandatory conservation measures will be required.

## **Stage 2: WATER WARNING**

As the water supply problems become more severe, a “Water Warning” will be implemented. In a “Water Warning”, water shortage conditions are present and water supplies declining. Additional reductions in water use are encouraged, and mandatory restrictions are placed on outdoor water use. The City is able to meet demands as they exist, but lowering the demands will extend the City’s ability to meet future demands without significant disruption. The following requirements will be in effect throughout a “Water Warning”:

### Triggers:

A “**Water Warning**” is in effect when any combination of two or more of the following conditions occurs:

1. Daily water demand for 3 consecutive days is in excess of 95% of the available yield from all sources.
2. Daily water demand for 3 consecutive days is in excess of 95% of the treatment capacity of all treatment facilities.
3. Total system storage does not recover above 70% prior to 5 a.m.
4. The Governor declares a “Drought Warning” for Johnson County, contingent upon the extended forecast for temperature and rainfall.

### Goals:

The goals of this stage are:

- To reduce peak demands to manageable levels.
- To maintain the integrity of the City’s water supply system to ensure essential water needs, including life safety and fire suppression.

### Education Actions:

1. The City will make weekly news releases to the local media describing present conditions and the water supply outlook, and a description of the water restrictions in effect.

2. The City Manager will make public announcements through the news media concerning the “Water Warning” and the water use restrictions in effect. The announcement will include a description of the restrictions.
3. The City will post “Water Warning” information on the City’s website and Channel 7.
4. Water conservation articles will be provided to the local newspaper.

#### Management Actions:

1. System pressure will be reduced to 70 pounds per square inch (psi) in the northwest section of Olathe and 50 pounds per square inch in the southeast section of Olathe.
2. Review previous week summaries of precipitation, temperature, and water and storage levels.
3. Pumping rates of the vertical wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. The City will suspend outdoor watering with potable water, including operation of fountains, watering of City grounds and washing of vehicles.
5. System water demand will be satisfied by the treatment capacity of the water treatment facilities.
6. The City will seek additional water supply from Johnson County WaterOne.
7. Monitor and review target flows on the Kansas River with the Kansas River Water Assurance District.

#### Regulation Actions:

1. A mandatory odd/even lawn watering schedule (or equivalent demand reduction procedures) will be imposed on all water customers. Customers with odd-numbered addresses will water on odd-numbered calendar days, and even-numbered addresses will water on even-numbered calendar days. These restrictions shall not apply to any person, firm or corporation engaged in the business of growing or selling plants of any kind. Additional exceptions may be granted on a case-by-case basis.
2. Outdoor water use, including lawn watering and car washing, will be restricted to after 6:00 p.m. and before 6:00 a.m.
3. Golf courses will be restricted from watering with potable water.
4. Procedures that provide water demand reduction that is equivalent to odd/even watering schedules will be considered on a case-by-case basis.

#### Requirements for Termination of WATER WARNING:

The “Water Warning” shall terminate when the triggering events have ceased to exist for a period of fourteen (14) consecutive days, or when substantial changes in weather conditions occur, affecting water demands. Upon termination of a “Water Warning”, a “Water Watch” becomes operative.

When conditions are such that more stringent conservation measures are required, a “Water Emergency” shall be declared and mandatory conservation measures will be required.

### **Stage 3: WATER EMERGENCY**

As the water supply problem continues to deteriorate, a “Water Emergency” will be implemented. In a “Water Emergency”, severe water shortage conditions are present and supplies are limited. Mandatory restrictions on outdoor water use are in place. System failure is a possibility if conditions do not improve or demands do not decline. The following restrictions will be in effect during a “Water Emergency”:

#### Triggers:

A “**Water Emergency**” is in effect when any combination of two or more of the following conditions occurs:

1. Daily water demand for 2 consecutive days is in excess of 100% of the available yield from all sources.
2. Daily water demand for 2 days is in excess of 100% of the treatment capacity of all treatment facilities.
3. Total system storage does not recover above 60% prior to 5 a.m.
4. The Governor declares a “Drought Emergency” for Johnson County, contingent upon the extended forecast for temperature and rainfall.

#### Goals:

The goals of this stage are:

- To reduce peak demands to manageable levels.
- To maintain the integrity of the City’s water supply system to ensure essential water needs, including life safety and fire suppression.

#### Education Actions:

1. The City will make daily news releases to the local media describing present conditions and the water supply outlook, and a description of the water restrictions in effect.
2. The City Manager will make public announcements through news media that “Water Emergency” water use restrictions are in effect. The announcements will include a description of the water restrictions in effect.
3. The City will post “Water Emergency” information on the City’s website and on Channel 7.
4. The City may hold public meetings to discuss the emergency, the status of the City water supply and further actions that need to be taken.

### Management Actions:

1. System pressure will be maintained at 60 pounds per square inch (psi) in the northwest section of Olathe and 40 pounds per square inch (psi) in the southeast section of Olathe.
2. Review previous day summaries of precipitation, temperature, and water and storage levels.
3. Pumping rates of the vertical wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. Additional short-term supplies of raw water may be activated if available.
5. The City may seek additional emergency water supply from Johnson County WaterOne, other regional water suppliers, and the state or the federal government.
6. Request additional water releases from the Kansas River Water Assurance District.

### Regulation Actions:

As the water supply problem continues to deteriorate, additional mandatory restrictions will be placed on essential uses. “Water Emergency” restrictions will be in effect whenever additional restrictions are necessary so that no water customers inside the city limits will be without water. The following restrictions will be in effect during a “Water Emergency”:

- (a) Outdoor water use with potable water will be prohibited. This includes, but is not limited to, the following: water used for outdoor watering, either public or private, for gardens, lawns, trees, shrubs, plants, parks, golf courses, playing fields, swimming pools or other recreational areas; or the washing of motor vehicles, boats, trailers, or the exterior of any building or structure.
- (b) Only non-potable water sources may be used to perform the outdoor watering.

### Requirement for Termination of WATER EMERGENCY:

The “Water Emergency” shall be terminated when the triggering events have ceased to exist for a period of fourteen (14) consecutive days. Upon termination of a “Water Emergency”, a “Water Warning” becomes operative.

## **Plan Revision, Monitoring and Evaluation**

The City of Olathe 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 its plan. The City will also provide a status report to the Division of Water Resources which will 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 goal.

## CHAPTER 13.34

### WATER CONSERVATION

#### Sections:

13.34.010	Purpose
13.34.020	Definitions
13.34.030	Declaration of Water Watch
13.34.040	Declaration of Water Warning
13.34.050	Declaration of Water Emergency
13.34.060	Voluntary Conservation Measures
13.34.070	Mandatory Conservation Measures
13.34.080	Violations and Penalties

**13.34.010 Purpose.** The purpose of this ordinance is to provide for the declaration of a water supply watch, warning or emergency and the implementation of voluntary and mandatory water conservation measures throughout the City in the event such a watch, warning or emergency is declared. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

#### **13.34.020 Definitions.**

(a) “Water”, as the term is used in this ordinance, shall mean water available to the City of Olathe, Kansas for treatment by virtue of its water rights or any treated water introduced by the City into its water distribution system, including water offered for sale at any coin-operated site.

(b) “Customer”, as the term is used in this ordinance, shall mean the customer of record using water for any purpose from the City’s water distribution system and for which either a regular charge is made or, in the case of coin sales, a cash charge is made at the site of delivery.

(c) “Waste of water”, as the term is used in this ordinance, includes, but is not limited to: 1) permitting water to escape down a gutter, ditch or other surface drain; or 2) failure to repair a controllable leak of water due to defective plumbing. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.030 Declaration of Water Watch.** A “Water Watch” is in effect when a combination of two or more of the following conditions occurs:

(a) Daily water demand for 3 consecutive days is in excess of 90% of the available Olathe raw water yield.

(b) Daily water demand for 3 consecutive days is in excess of 90% of the treatment capacity of all Olathe treatment facilities.

(c) Total system storage does not recover above 80% prior to 5 a.m.

(d) The Governor declares a “Drought Watch” for Johnson County.

The “Water Watch” will be terminated when the triggering events have ceased to exist. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.040 Declaration of Water Warning.** As the water supply problems become more severe, a “Water Warning” will be implemented. A “Water Warning” is in effect when any combination of two or more of the following conditions occurs:

(a) Daily demand for 3 consecutive days is in excess of 95% of the available Olathe raw water yield.

(b) Daily water demand for 3 consecutive days is in excess of 95% of the treatment capacity of all Olathe treatment facilities.

(c) Total system storage does not recover above 70% prior to 5 a.m.

(d) The Governor declares a “Drought Warning” for Johnson County.

The “Water Warning” shall terminate when the triggering events have ceased to exist for a period of fourteen (14) consecutive days, or when substantial changes in weather conditions occur, affecting water demands. Upon termination of a “Water Warning”, a “Water Watch” becomes operative. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.050 Declaration of Water Emergency.** As the water supply problem continues to deteriorate, a “Water Emergency” will be implemented. A “Water Emergency” is in effect when any combination of two or more of the following conditions occurs:

(a) Daily water demand for 2 consecutive days is in excess of 100% of the available Olathe raw water yield.

(b) Daily water demand for 2 consecutive days is in excess of 100% of the treatment capacity of all Olathe treatment facilities.

(c) Total system storage does not recover above 60% prior to 5 a.m.

(d) The Governor declares a “Drought Emergency” for Johnson County.

The “Water Emergency” shall be terminated when the triggering events have ceased to exist for a period of fourteen (14) consecutive days. Upon termination of a “Water Emergency”, a “Water Warning” becomes operative. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.060 Voluntary Conservation Measures.** Upon the declaration of a “Water Watch” as provided in this ordinance, the City Manager is authorized to call on all water customers to employ voluntary water conservation measures to reduce outdoor water use including, but not limited to, the following:

(a) Voluntarily implement an alternate day (odd/even) schedule for outdoor watering.

(b) Limit nonessential outdoor water uses and implement wise outdoor watering.

(c) Water between 6 p.m. and 6 a.m.

(d) Limit, or eliminate, outdoor water use on weekends.

(e) Use a soaker hose to apply water efficiently to plants.

(f) Limit car washing at home or use a commercial carwash that recycles water.

(g) Avoid hosing down outside areas, such as sidewalks, patios and driveways. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.070 Mandatory Conservation Measures.** Upon the declaration of a “Water Warning” as provided in this ordinance, the City Manager is authorized to call on all water customers to implement certain mandatory restrictions on outdoor water use, including, but not limited to, the following:

(a) A mandatory odd/even lawn watering schedule (or equivalent demand reduction procedures) will be imposed on all water customers. These restrictions shall not apply to any person, firm or corporation engaged in the business of growing or selling plants of any kind or commercial car washes. Additional exceptions may be granted on a case-by-case basis.

(b) Outdoor water use, including lawn watering and car washing, will be restricted to after 6:00 p.m. and before 6:00 a.m.

(c) Golf courses will be restricted from watering with potable water.

(d) Procedures that provide a water demand reduction that is equivalent to odd/even watering schedules will be considered on a case-by-case basis.

Upon the declaration of a "Water Emergency" as provided in this ordinance, the City Manager is also authorized to implement additional mandatory restrictions on outdoor water use. The following restrictions will be in effect during a "Water Emergency": outdoor water use with potable water will be prohibited. This includes, but is not limited to, the following: water used for outdoor watering, either public or private, for gardens, lawns, trees, shrubs, plants, parks, golf courses, playing fields, swimming pools or other recreational areas; or the washing of motor vehicles, boats, trailers, or the exterior of any building or structure. Only non-potable water sources may be used to perform outdoor watering. In addition, the City Manager may temporarily terminate water service to a customer operating an irrigation system in violation of the "Water Emergency" provisions. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)

**13.34.080 Violations and Penalties.** The ordinance authorizes the City Manager to enforce the provisions of the ordinance. Enforcement will be made in the following manner.

(a) It shall be unlawful to violate any of the provisions of this ordinance. No person shall be convicted of violating this ordinance unless such person in fact turned on water, directed the turning on of water or kept water turned on after learning it was turned on in violation of this ordinance, or failed to turn off automatic devices capable of turning on water in violation of this ordinance. It will not be necessary, however, to present a witness who saw the accused turning on the water, if the circumstances indicated the accused did turn on the water.

(b) In the event of a violation, a written notice of the violation shall be provided to the customer of record by personal service, or by delivering the same to and leaving it with some person of suitable age and discretion upon the premises; or, if no person is found on the premises, by affixing a copy thereof in a conspicuous place on the door to the entrance of said premises and by mailing a copy thereof to such person by registered or certified mail to his/her last known address. Said notice shall describe the violation and order that it be corrected, cured or abated immediately or within such specified time as the City determines is reasonable under the circumstances.

(c) Any person, firm or corporation violating any provisions of this ordinance, including failing to comply with any notice or order issued pursuant to 13.34.080(b), shall be fined not less than One Hundred Dollars (\$100.00) nor more than Five Hundred Dollars (\$500.00) for a first conviction; not less than Two Hundred Dollars nor more than Five Hundred Dollars (\$500.00) for a second or subsequent conviction. A separate offense shall be deemed committed on each day during or on which a violation occurs or continues. (Ord. 04-60 § 1, 2004; Ord. 03-35 § 1, 2003.)