

ORDINANCE NO. O-2014-54

AN ORDINANCE AMENDING THE TYLER CITY CODE CHAPTER 19, "UTILITIES", BY ADOPTING THE 5 YEAR UPDATED WATER CONSERVATION AND EMERGENCY DEMAND MANAGEMENT PLAN; PROVIDING A PENALTY OF NOT LESS THAN \$10 PER DAY NOR MORE THAN \$200 PER DAY FOR EACH DAY OF NON COMPLIANCE AND/ OR DISCONNECTION OF WATER SERVICES TO SUCH USERS BY THE CITY; PROVIDING FOR PUBLICATION AND ORDAINING OTHER MATTERS RELATED TO THE FOREGOING.

WHEREAS, the City Council has determined there is an urgency need in the best public interest of the City of Tyler to adopt the amended 5 Year Water Conservation and Emergency Demand Management Plan, and the City Council further determines that such a public need is of an emergency nature and the legal requirement of two required separate readings of the subject ordinance be dispensed with and waived; and

WHEREAS, the City Council now desires to evidence its approval of the 5 Year Water Conservation and Emergency demand Management Plan and adopt such a plan as an official policy of the City;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TYLER, TEXAS:

PART 1: That the City Council hereby approves and adopts the amended 5 Year Updated Water Conservation/ Emergency Demand Management Plan by amending Chapter 19, "Utilities" of the City Code by adding new Article X, entitled "Water Conservation/Emergency Demand Management Plan as follows:

ARTICLE X. Water Conservation/ Emergency Demand Management Plan

Sec. 19-300. Adoption of Plan.

City commits to implement the program according to the procedures set forth in the adopted plan. The City shall report to the Texas Commission on Environmental Quality annually on the implementation and effectiveness of the plan in accordance with the outline set forth in the plan.

Sec. 19-301. Implementation.

In regards to implementation and enforcement of the Water Conservation/Emergency Demand Management Plan, the City Manager is designated as the official responsible for implementation and enforcement, and the following guidelines are adopted:

- a. Mild drought occurs when:
 - 1. Average daily water consumption reaches 85% of production capacity. Production capacity is defined as on line capacity in case of failure of a water source.
 - 2. Average daily water consumption will be reduced by 5% or 1.25 MGD
 - 3. Consumption (85%) has existed for a period of three days.
 - 4. Weather conditions are considered in drought classification determination. Predicted long, hot or dry periods are to be considered in the impact analysis.
- b. Moderate drought conditions are reached when:
 - 1. Average daily water consumption reaches 90% of rated production capacity for a three day period. Production capacity is defined as on line capacity in case of failure or shut down of one or both water treatment plants.
 - 2. Average daily water consumption will be reduced by 10% or 2.50 MGD
 - 3. Weather conditions indicate mild drought will exist five (5) days or more.
 - 4. One or more ground storage tank is taken out of service during mild drought period.
 - 5. Storage capacity (water level) is not being maintained during period of 100% rated production period.
 - 6. Existence of any one listed condition for a duration of 36 hours.
- c. Severe drought classification is reached when:
 - 1. Average daily water consumption reaches 100% of production capacity. Production capacity is defined as on line capacity in case of failure or shut down of one or both water treatment facilities.
 - 2. Average daily water consumption will be reduced by 25% or 6.25 MGD
 - 3. Average daily water consumption will not enable storage levels to be maintained.
 - 4. System demand exceeds available high service pump capacity.
 - 5. Any two (2) conditions listed in moderate drought classification occurs at the same time for a 24 hour period.
 - 6. Water system is contaminated either accidentally or intentionally. Severe condition is reached immediately upon detection.
 - 7. Water system fails – from acts of God, (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection.
- d. In the event severe classification conditions persist (Item c. above) for an extended period of time, the City may ration water usage and/ or terminate service to selected users of the system in accordance with the following sequence:
 - 1. Hospitals
 - 2. Nursing Homes
 - 3. Schools
 - 4. Industrial
 - 5. Commercial
 - 6. Residential
 - 7. Recreational

Sec. 19-302. Penalties.

Users of City of Tyler water except for the City, that do not comply with Section III of this ordinance shall be subject to a penalty and a fine of not less than \$10.00 per day nor more than \$200.00 per day for each day of noncompliance and/ or disconnection or discontinuance of water services to such users by the City.

Sec. 19-303. Introduction.

A. The 69th Texas Legislature passed House Bill (HB) 2 and House Joint Resolution (HJR) 6 in 1986. This Act requires that a Water Conservation Plan and Emergency Demand Management Plan be adopted by political subdivisions. House Bill 2 was approved by Texas Voters November 6, 1995, becoming an amendment to the Texas Constitution. In 2002 the State of Texas adopted the State Water Plan which recognizes the need for water conservation in order to meet future needs of Texas. In 2003, the 78th Texas Legislature established the Water Conservation Implementation Task Force via passage of Senate Bill (SB) 1094. In SB 1094 the task force was directed to review, evaluate and recommend several water based conservation programs including the development of a best management practices guide for use by Regional Water Planning Groups and political subdivisions responsible for water delivery service. These actions enabled the Texas Commission on Environmental Quality (TCEQ) and the Texas Water Development Board (TWDB) to develop Best Management Practices (BMP's) guidelines, Task 1 Section 3 of SB 1094, for water providers of the state to consider while updating Water Conservation and Emergency Demand Management Plans. The TWDB and the TCEQ were to make efforts to implement HB 2660 which directed the two agencies to identify quantified target goals for water conservation for water suppliers and other entities to include goals for water loss programs and municipal use in gallons per capita per day (gpcd).

B. Utilization of all State resources is dictated, if affordable development is to occur on a statewide basis. Water, a basic human need, will be a major factor in development. Conservation of water is necessary if we are to meet future needs for our most valuable resource.

C. Passage of House Bill 2 and House Joint Resolution 6, Senate Bill (SB) 1094, House Bill 2660, and in 2007 House Bill 4 by the Texas Legislature and Voters of Texas, reflect that the need for conservation of water resources has been recognized and is a high priority item for State Officials as well as the Environmental Protection Agency and other State and Federal agencies.

D. Planning Area. The planning area consists of the City of Tyler and its extraterritorial jurisdiction which contains approximately 52 square miles and approximately 693 miles of main lines. Tyler has a current population of 109,242.

E. Contingency Plan. City of Tyler Code Section 19-304

System improvements will be developed from study and evaluation of existing conditions to establish a specific program for meeting desired goals. BMP's will be implemented to aid in the reduction of per capita water usage to attempt to meet state established targets. Specific targets and goals developed by the utility using the Best Management Practices (BMP's) or other strategies to reduce water waste, loss, and consumption. Other requirements are that the utility set specific quantifiable targets and goals for the Drought Contingency Plan and the trigger points for the implementation of the drought stages. These required goals are to be quantifiable and based on municipal use in gallons per capita per day.

F. Utility Evaluation Data. The following checklist provides a convenient method to insure that the most important items needed for the development and continuation of the conservation and emergency demand management plan program are considered.

1. Utility Evaluation Data	2013
(a) Population of Service	126,098
(b) Area of Service area	52 (Sq. mi.)
(c) Number and Type of equivalent 5/8" meter connections in service area: 36,028 (Conn)	
(d) Net rate of new connections per year (new connections less disconnections) 293(Conn)	
(e) Water use information:	
1) Water production for 2013 Approx.	8,900,878,100 (gal./yr.)
2) Average water production for last two years Approx.	8,319,531,250 (gal./yr.)
3) Average monthly water production for last two years	693,294,271 (gal./mo.)
4) Estimated Monthly Sales	\$ 1,613,385.28

	2013			
			Metered	Revenue
JANUARY			490,740,800	\$ 1,598,007.40
FEBRUARY			427,716,000	\$ 1,003,696.90
MARCH			573,834,800	\$ 1,109,589.56
APRIL			577,403,200	\$ 1,396,086.91
MAY			725,588,200	\$ 1,421,027.92
JUNE			929,974,000	\$ 1,797,624.93
JULY			1,088,198,700	\$ 2,000,625.16
AUGUST			1,231,124,100	\$ 2,333,173.13
SEPTEMBER			1,072,105,000	\$ 2,388,789.28
OCTOBER			734,591,500	\$ 2,203,771.77
NOVEMBER			544,165,000	\$ 1,157,463.02
DECEMBER			505,466,200	\$ 950,767.42
TOTAL			8,900,878,100	\$ 19,360,623.30
AVERAGE			741,739,842	\$ 1,613,385.28

(5) Average monthly water use 741,739,842 G/Mo (Res./Comm./Ind.)
 (6) Peak Daily Use 44,989,000 GPD (Res./Comm./Ind.)
 (7) Gallons Per Capita Per Day Water Use

Year	2009	176.57	GPCD
Year	2010	198.71	GPCD
Year	2011	250.82	GPCD
Year	2012	209.99	GPCD
Year	2013	187.39	GPCD

(8) Peak to average use ratio (average daily summer use divided by annual average daily use) 1.45
 (9) Unaccounted for water (% of water production) 9.46%

(f) Safe annual yield of water supply Lake Tyler/Lake Tyler East – 40,325 ac.-ft./year; Lake Palestine 67,200 ac.-ft./year; Wells 8.0 mgd

(g) Peak daily design capacity of water system 72 mgd
(h) Major high-volume customers: Mother Francis Hospital, Delek Refining Ltd., Walnut Grove W.S.C., Community Water, University of Texas at Tyler, and Caldwell Zoo, Trane US Inc.

(i) Population and water use projections:

<u>Year</u>	<u>Population Potential</u>	<u>Daily Avg. MGD</u>	<u>Daily Max MGD</u>
2014	126,098	24.0	35.5
2019	131,000	27.5	36.3
2024	136,630	30.5	37.5

(j) Percent of water supply connection in system metered:

100% Res. 100% Comm.

(k) Water Rate structure/Existing rate structure: SEE City Code Section 19-60

(l) Average annual revenues from water rates: (2009-2013) \$ 18,879,314.93

(m) Average annual revenue from non-rate derived sources: None

(n) Average annual water revenues for other purposes: None

(o) Applicable local regulations: None

(p) Applicable State, Federal, or other regulations as a Public Water Supply. The City of Tyler must abide by the rules and regulations of the following agencies:

1. Texas Commission on Environmental Quality
2. Texas Water Development Board
3. Texas Department of Health
4. Environmental Protection Agency

G. Needs and Goals

1. Utilization of all State resources is dictated if affordable development is to occur on a state wide basis. Water, a basic human need, will be a major factor in development. Conservation of water is necessary if we are to meet future needs for our most valuable resource.

2. Homeowner and user education is emphasized in the City of Tyler Conservation Plan to meet the 69th Texas Legislature (1995), 78th Texas Legislature (2003) requirements as dictated by House Bill (HB) 2, House Joint Resolution (HJR) 6 (1995), Senate Bill (SB) 1094 (2003), House Bill (HB) 2260 and House Bill (HB) 857. The plan has been prepared using current guidelines, from the TWDB and TCEQ, which have been developed to meet requirements of State and Federal regulations.

3. A substantial reduction in water consumption will also be noticeable in wastewater facility flows as conservation methods are implemented within the customer households. Education of homeowners is, and will continue to be necessary if a conservation plan is to succeed in effectively reducing water waste, water use and ultimately, wastewater flows. Currently, the City of Tyler has permitted water rights for Lake Palestine in the amount of 67,200 acre feet, Lake Bellwood in the amount of 2,100 acre feet, and Lake Tyler/ Lake Tyler East in the amount of 40,325 acre feet. These amounts could possibly be increased if additional water rights were permitted and approved by the TCEQ.

4. Tyler, through customer education, city maintenance and operation, and implementation of planning elements, had originally established dual goals for the reduction of water waste and usage. First, a reduction in municipal and residential water usage will be established in the amount of 1% annually or to 178 gpcd Municipal and 1% annually for residential gpcd to 109.68 gpcd. The 10% reduced municipal goal is 168.6 gpcd and residential goal is set at 103.91 or until such a time that the municipal goal of 140 gallons per capita per day has been met or exceeded. Secondly, unaccounted for water is to be reduced by implementation of Best Management Practices and the 5 year goal reduction for unaccounted for water is 5% or 76 MG, and a 10 year reduction of unaccounted for water is 10% annually or 151 MG. The 5 year goal reduction for residential unaccounted for water is 5% or 2.12 or 40 gpcd, and a 10 year reduction of residential unaccounted for water is 10% or 4.2 or 38.3 gpcd. These items are related and can be attained from outlined planning elements and implementation of the best management practices.

5. Achieving the established goals will conserve our most valuable resource, water. It will also enable existing facilities to provide service for additional customers without further expenditures for expansion. However, if the need does arise, the city of Tyler does have the capability of expanding the water treatment plants, such as the Lake Palestine Water Treatment Plant, to allow for future growth for the service area.

H. Public Involvement

1. The City of Tyler City Council meets on a regular basis on the 2nd and 4th Wednesday of each month at 9:00 am at City Hall. The meeting agenda is posted in accordance with State law, listing items for discussion and to be acted upon by the Council. The agenda is also posted on the City of Tyler website and a cable television channel dedicated to public information. Meetings are open to the Public, and the public is given an opportunity to speak and voice their views and opinions when listed on the agenda for comment.

2. Council meetings are often attended by representatives of local newspapers and videotaped by local television news. The meetings are videotaped in their entirety by the City and aired on the City's cable television channel.

Sec. 19-304. Water Conservation Plan and Best Management Practices

A. The following planning elements have been developed in accordance with all requirements published in both TCEQ and TWDB Guidelines, including all regulations written from 2004 to 2014 by the Texas Water Development Board and the Water Conservation Implementation Task Force.

B. The Best Management Practices that have been adopted and implemented by the

City of Tyler are:

Educational Best Management Practice (BMP)

Plumbing Codes BMP

Water Conservation Retrofit Program

Conservation Oriented Water Rate Structure

System Water Audit and Water Loss BMP

Industrial Alternate Sources and Reuse BMP

Metering of All Connections and Retrofit of Existing Connections BMP

Prohibition on Wasting Water BMP

Industrial Site Specific Conservation BMP

Cooling Towers BMP

C. Educational Best Management Practice:

The City of Tyler informs its customers of various recommended methods for reduction in water consumption. Generally, a majority of water consumption in the City is consumed by residential customers. Therefore, the target area for educational information is residential customers.

1. First year program or activities consisted of the activities listed:

(a) A Fact Sheet explaining the Conservation Plan was developed and made available to the customers and schools.

(b) An article was placed in the local newspaper, correlated with Fact Sheet preparation and included information on how to acquire the "Homeowners Guide", highlights of water saving methods, and elaboration on available brochures. The brochures will continue to be available at Tyler Water Utilities Office and certain brochures will be mailed directly to the customer. One of the brochures will target one particular household water using appliance and include specific measures for conserving water.

(c) Make available to each new customer the "Homeowner's Guide to Water Use and Conservation", "Water...Half a Hundred Ways to Save It", "How to Save Water Outside the Home", or "How to Save Water Inside the Home". These new customer guides will be available at Tyler Water Utilities Office. The city will also update the guides and brochures, and make available the materials on an annual basis.

2. Long-term program consists of the following listed activities each year after the first year of implementation of the program:

(a) Newspaper article targeting another household water using appliance or item and methods for conserving water (dishwasher, shower, toilet, laundry). The newspaper article will be correlated to a brochure mail out.

(b) Brochures relating to outside household use, and car washing, lawn watering, correlated to weather predictions will be mailed to customers and made available either by mail out, pick-up or via the City's web page.

(c) "Homeowner's Guide to Water Use and Conservation", "Water...Half a Hundred Ways to Save It", "How to Save Water Outside the Home", or "How to Save Water Inside the Home" brochures will continue to be distributed to new customers and made available via links on the City's web page.

3. New customers will be advised of the City's Conservation Program and provided with a copy of Homeowners Guide and other listed guides and brochures, if requested. The City will utilize resource materials available from the Texas Commission on Environmental Quality and other agencies or organizations which develop and distribute pertinent information or data on water conservation to water customers throughout the state.

4. Educational materials will be given to area schools for use with taught curriculum to emphasize the importance of conservation. The target goal is to reach 10% of students on an annual basis, on a tiered program.

5. Educational tours of the water and wastewater treatment facilities are given to area schools, groups, and clubs to provide education on the operation of the facilities and the need for conservation methods at home, work, and school.

6. Educational BMPs are usually not easily or accurately quantifiable, therefore an estimate of savings will not be included for this BMP. The end result of an educational program is a long-term investment in the customers and their families that when taught conservation it will be more likely that they will follow the teachings and therefore conserve water and money through

installation of water saving devices, performing outside watering activities at appropriate times and with proper tools.

D. Implementation:

1. Educational materials have been distributed to area elementary schools starting the first year along with information regarding the availability for tours to the water and wastewater treatment facilities.

2. During the second year of implementation, the area intermediate/ middle schools were targeted for educational materials and informational tours.

3. The third year of implementation targeted the area high schools and higher education facilities. Tours for this level was also available. Materials and other such programs are made available.

4. Organizations, clubs and groups including scouting programs, 4-H, and boys & girls clubs were encouraged to participate in the tour programs and received educational materials.

5. Documentation of the educational materials and type of materials made available to the schools, groups, clubs and other organizations was kept on file and reported annually. The report included the approximate percent of students reached by the distribution of such materials and that said materials met state curriculum requirements. This information is also reported on the required annual reports to TCEQ and TWDB.

6. Documentation of the number of presentations made on an annual basis will be kept on file and reported annually.

7. An annual budget for the educational materials and presentation programs related to conservation shall also be included in the annual report.

8. Student surveys will be performed, filed and reported annually.

E. Plumbing Codes:

The City of Tyler currently uses the required most current edition of the International Plumbing Code as their plumbing code. This Code included requirements for the use of water saving plumbing fixtures in new construction.

F. Water Conservation Retrofit Program:

The City of Tyler encourages customers to utilize low demand fixtures and appliances through proposed educational sources described in this Plan. The City advises customers of low water demand items, shower heads, toilet dams, etc., by mail, and/or publication of newspaper articles, emphasizing the importance of water saving devices. The City will contact local suppliers of plumbing supplies advising them of the water saving drive content. Suppliers will be encouraged to stock low water usage fixtures and low water use supplies. Different programs for new more energy efficient appliances and household items will be offered either through the city or in partnership with the city to customers. Typically, these programs are brought to the attention of the customers via the city's webpage and/ or by publication using various types of media.

G. Conservation Oriented Water Rate Structure:

Currently the city has a "Promotional" rate structure in place. Over the first five years of the plan, a "Conservation" type rate structure was analyzed and weighed. The city's rate consultant and City Council continue to discuss if this type of rate structure would be beneficial to the city of Tyler Water Utilities. If it is found to be a structure that would be beneficial to the city, the City Council will vote on the issue of changing the current "Promotional" rate structure to a "Conservation" rate structure. See Appendix B for the current rate structure for the City of Tyler.

H. System Water Audit and Water Loss:

1. The city of Tyler implemented the System Water Audit and Water Loss BMP from the TCEQ and TWDB Best Management Practices Guidelines starting in the first year and continued in phases through the remainder of the first five year planning period.

2. The city conducted a system water audit in two parts, the first of which is known as a "Top Down" audit. The city used existing records to determine estimated annual water loss. Previously, the city of Tyler has a water loss of approximately 10 %. The city has been fortunate and continued diligently to keep other information such as customer billing summaries, leak repair summaries, meter change out summaries and other relevant water use summaries and was able to continue the current number of approximately 9 to 10%, depending on the season. The water utility billing software is currently capable of reporting the necessary "top-down" audit information needed. Annually the city gathers the "top down" audit information, they then determine the areas of concern and the proper conservation techniques to implement to bring down the water loss percentage and report this information to the appropriate agency. The City of Tyler's goal is to have the lowest percentage of "unaccounted for water" or "water loss" possible. The City has set a target goal of an ILI of 3. If the ILI of 3 is still not met with implementing the BMP, the city will continue with the second step of the water audit.

3. Several phases of the "bottom-up" portion of the water audit were implemented over the remainder of this last five year period. This second step, involved the detailed investigation of policies and procedures of the utility. The "bottom-up" portion of the audit also includes procedures for all water use by the fire department, for line flushing, street cleaning and all other authorized uses to be metered and or accounted for.

4. A "leak detection program" was implemented to monitor the system for leaks. Records are kept to track the repair of the leak including the length of time for repair, pressure of the repaired line, and approximate amount of water lost due to the leak.

5. A program to monitor system pressures was also set up to monitor pressures throughout the system to aid in locating line leaks.

6. A computerized water model of the Tyler water system was prepared and has been updated as necessary.

I. Implementation:

The City of Tyler has implemented the BMP using all available resources. The city's goal, as stated previously, is an ILI of 3. In order to reach this goal, the city will have to continue to be proactive in the actions and steps taken during the continued implementation of the Water Loss Audit Best Management Practice. Descriptions of the steps taken are as follows:

1. A utility system water model was prepared. The system model is instrumental in assessing large leakage loss amounts, system pressures and confirming pressure zones.

2. Staff will continue to be conservation minded in the operating pressures of the water system. The pressures will differ depending on the season, topography, fire demand, and elevated storage tank levels.

3. The water utilities staff will make regular inspections on water mains, fittings, and connections, to include fire hydrants. Results are kept as reference for annual updates.

4. A leak detection program was started including training for all water utilities staff.

i. Staff performs leak surveys in addition to the regular inspections of the water mains and connections.

ii. Leaks are tracked by the Utilities Department for water loss estimation, time from report to repair, and volume of leak.

iii. Customer complaints/ reports of leakage, taste and odor and all other complaints are kept on file with the Utilities Department.

5. All meter readers and maintenance employees will have training on visual inspections and leak detection. A previously implemented citywide meter change-out program has been completed. A meter repair and replacement program will continue which includes the following procedures:

i. Failed meters will be replaced when located.

ii. Meters replaced through the city's contract with Johnson Controls have a ten year warranty.

iii. 2 % of meters will be tested annually and must be within 5% accuracy.

iv. All municipal connections will be metered for increased accuracy of water use.

v. A street cleaner water use tracking method has been put in place and monitored.

vi. Unauthorized taps or water thefts are assessed a charge for the illegal tap, and the city proceeds with disconnection of the illegal tap.

J. Water Audits and Leak Detection:

1. Another aspect to the water audit BMP is the monitoring of monthly consumption. All records are kept up to date and monitored for fluctuation. The Audit System has become a major tool in system management. This Plan has developed a reliable and effective leak detection program. It is estimated unaccounted for water can be reduced by approximately one percent (1%) per year. The City is aware that assistance in leak detecting surveys can be obtained from the Texas Water Development Board (TWDB) Staff. The TWDB has portable leak detection equipment available for loan to municipalities and can provide personnel for demonstration of equipment and assist in planning survey programs.

2. The city wide meter replacement and aggressive enactment of a stricter detection program has enabled city staff to determine the need for possibly seeking further assistance for the use of electronic equipment when necessary. The current detection program consists of the following observations and activities:

a. Leaks reported by citizens.

b. Leak detection by Meter Readers.

c. Continual checking and servicing of production, pumping and storage facilities.

d. Quick response by water utilities staff to respond to reported problems.

K. Industrial Alternate Sources and Reuse of Process Water:

1. Area industrial customers were contacted to determine if reuse and recycling is being employed. One such water customer, Kelly & Vesuvius, Inc., uses raw untreated water and reuses wastewater by returning it to their product line and reusing it for process again.

2. However, at this time wastewater reuse is not possible by the city of Tyler. The location of the Wastewater treatment plant with relation to industrial users is not conducive. The City is not located in an arid section of Texas, and therefore reuse for irrigation purposes has not been developed.

L. Prohibition on Wasting Water:

1. The city of Tyler, through an ordinance already in place, requires water users to be conservation minded when watering and using water, whether it is residential or commercial. The adopted city ordinance is posted on the city's website. During the Education BMP, the education of the city's customers has been detailed. Educational materials have been available at the Tyler Water Utilities Office and others have been mailed directly to the customer.

2. A system has been developed to track offenders and include violations, compliance notification, and other pertinent information. Compliance notifications are kept up to date to help locate potential theft situations. The city of Tyler is committed to keep the citizens of Tyler educated on the importance of water conservation.

M. Industrial Site Specific Conservation:

Southwest Dairies is a large industrial water user within the city of Tyler's water system. The dairy has installed new technology to reduce their water consumption and increase the efficiency of the water that is utilized in the operation of the plant.

N. Cooling Towers:

Trane Corporation is an industrial business located within the Tyler water system. Trane Corp. has partial use of the G.E. Elevated Water Tank for use in their plant. This major industrial water consumer uses cooling towers in its process. The Trane Corporation has a policy to periodically modify and replace the cooling towers, as necessary. The replacement and modification to the cooling towers at the plant increases the efficiency of the systems as it relates to water usage.

O. Means of Implementation and Enforcement:

The City Manager, through his staff, has implemented the Conservation Plan and Best Management Practices (BMP) in accordance with City Council adoption of the Plan updates and included Best Management Practices. Enforcement will be provided by:

1. Refusing to provide taps for customers who do not meet requirements for Water Conservation fixtures as established by adopted international Plumbing Code.

2. Nonpayment of water bills will initiate prompt discontinuation of service. The customers service will be disconnected and a fee will be assessed for re-activation of the meter.

3. Analysis of water rates and adjusting rates as deemed appropriately by the City Council.

4. Immediate repair of leaks or the service will be shut off until the leak has been properly fixed. (Currently in a city ordinance)

5. Prosecution of water thefts with enforcing tap fees and immediate discontinuation of the water service including but not limited to having the meter locked out on any legal meters that were used for the illegal tap.

P. Contracts with Other Political Subdivisions:

Any political subdivision and/or wholesale customer contracting for water from the City of Tyler must have (1) an approved Texas Commission on Environmental Quality Water Conservation and Emergency Demand Management Plan in effect and/ or (2) must officially adopt applicable provisions of the City of Tyler's Water Conservation Drought Contingency and Emergency Demand Management Plan. Currently the City of Tyler has wholesale water contracts with the city of Whitehouse, Community Water and Walnut Grove Water Supply Corporation.

Q. Annual Reporting:

The City through adoption of this Plan, will continue to commit to report to the Executive Director of the Texas Commission on Environmental Quality Water, annually. The report to the Director will contain information describing:

1. Progress in meeting Conservation Plan Best Management Programs.
2. Public response to plan implementation and operation.
3. Quantitative effectiveness with reference to:
 - a. System reduction
 - b. Reduction in customer or per capita per day use
4. List of public information released during the year.

Sec. 19-305. Emergency Demand Management Plan

A. Threshold Condition

The Texas Commission on Environmental Quality Water suggests three (3) levels or conditions for determining degree of urgency for initiation of an Emergency Demand Management Plan. These three (3) levels of drought conditions are listed below as they relate to the City of Tyler water system. Drinking water for the City of Tyler is to be obtained from deep water wells located in the Carrizo and Wilcox Aquifers, and surface water from Lake Tyler, Lake Tyler East, and Lake Palestine.

1. Mild Drought occurs when:

- a. Average daily water consumption reaches 85% of production capacity. Production capacity is defined as on line capacity in case of failure of a water source.
- b. Average daily water consumption will be reduced by 5% or 1.25 MGD.
- c. Consumption (85%) has existed for a period of three (3) days.
- d. Weather conditions are considered in drought classification determination.

Predicted long, hot or dry periods are to be considered in the impact analysis.

2. Moderate Drought conditions are reached when:

- a. Average daily water consumption reaches 90% of rated production capacity for a three day period. Production capacity is defined as on line capacity in case of failure or shut down of one or both water treatment plants.
- b. Average daily water consumption will be reduced by 10% or 2.5 MGD
- c. Weather conditions indicate mild drought will exist five (5) days or more.
- d. One or more ground storage tank is taken out of service during mild drought period.
- e. Storage capacity (water level) is not being maintained during period of 100% rated production period.
- f. Existence of any one listed condition for a duration of 36 hours.

3. Severe Drought occurs when:
 - a. Average daily water consumption reaches 100% of production capacity. Production capacity is defined as on line capacity in case of failure or shut down of one or both water treatment facilities.
 - b. Average daily water consumption will be reduced by 25% or 6.25 MGD
 - c. Average daily water consumption will not enable storage levels to be maintained.
 - d. System demand exceeds available high service pump capacity.
 - e. Any two (2) conditions listed in moderate drought classification occurs at the same time for a 24 hour period.
 - f. Water system is contaminated either accidentally or intentionally. Severe condition is reached immediately upon detection.
 - g. Water system fails – from acts of God, (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection.

B. Drought Contingency Measures:

The Water Conservation and Emergency Demand Management Ordinance, adopted and included as part of this Plan, enables the City Manager or his designee to initiate action that will effectively implement the Plan. The following steps are recommended:

Step I

Step 1 drought measures as related to mild drought conditions and will initiate the following listed action. (Listed action is voluntary by user):

- a. Open the developed Information Center and designate the responsible information person.
- b. Advise public of condition and continually publicize any available information from City.
- c. Encourage voluntary reduction of water use.
- d. Contact commercial and industrial users and explain necessity for implementation of the Drought Contingency Plan and initiation of strict conservation methods.
- e. Implementation of system oversight and make adjustments required to meet changing conditions.
- f. Average daily water consumption will be reduced by 5% or 1.25 MGD.

Step II

Step II curtailment is to be initiated by the City Manager when moderate drought conditions exist. Listed action is compulsory on users and is intended to prohibit water waste. ("Water Waste" is defined as washing house windows, sidings, eaves and roof with hose, without the use of a bucket; washing driveways, streets, curbs and gutters, washing vehicles without cutoff valve and bucket, and unattended sprinkling of landscape shrubs and grass; draining and filling of swimming pools and flushing water system.)

- a. Outdoor residential use of water will be permitted on specified days. Outdoor water usage shall be allowed every forth day with the schedule being developed by the City Manager. Outdoor residential uses consist of washing vehicles, boats, trailers, landscape sprinkler systems and irrigation, recreational use of sprinklers, outside showers (in parks) and water slides.

- b. The City Manager will monitor system function and establish hours for outside water use, depending upon system performance.
- c. Information Center (City Hall) and publicity elements shall keep the public advised of curtailment status.
- d. Commercial and industrial users will be visited to insure voluntary conservation has been initiated.
- e. Average daily water consumption will be reduced by 10% or 2.5 MGD.

Step III

Step III curtailment shall be initiated upon existence of severe conditions as determined by the City Manager. The City Manager will curtail the use of water for:

- a. Vehicle washing, window washing, and outside watering (lawn, shrub, faucet dripping, garden, etc.)
- b. Public water uses which are not essential for health, safety and sanitary purposes. These include:
 - Street washing, fire hydrant flushing, filling of pools, watering of athletic fields and golf courses, and dust control sprinkling.
- c. Commercial users not listed and industrial users will be controlled to the extent dictated by the City Manager.
- d. The average daily water consumption will be reduced by 25% or 6.25 MGD.

Businesses requiring water as a basic function of the business, such as nurseries, commercial car wash, Laundromats, high pressure water cleaning, etc., will obtain written permission from the City Manager for intended water use.

The System Priority for water service shall be made on the following basis:

1. Hospitals	5. Commercial
2. Nursing Homes	6. Residential
3. Schools	7. Recreational
4. Industrial	

C. Information and Education:

1. The public will be made aware of conservation and emergency demand conditions by information and data transfer through the City's annual program. During periods of drought curtailment, Step I conditions establishes an information center, an information person, and shall utilize the most effective methods for information dissemination on a daily basis.

2. Close observation of the first year information program developed the most effective ways to communicate with customers. Posting notices and newspaper articles will be used during the implementation of the plan and when information needs to be given to the public.

D. Initiation Procedures:

Initiation procedures employed at any period are described in this Plan. Each condition will be met with a corresponding action by the City Manager, and the City Manager will affect curtailment, give notice, publicize and follow implementation of curtailment.

E. Termination of Curtailment:

1. Termination of each drought condition will begin when that specific condition has been improved to the extent that an upgraded condition can be declared by the City Manager. This process will not be employed until full service can be provided. System priority will be considered in return to upgraded condition, returning nursing homes, schools, etc., in priority order.

2. Termination will be initiated by the City Manager by giving notice, etc., as was given to enact drought curtailment as specified in this Plan for any change within the Plan.

F. Modification, Deletion and Amendment:

The City Manager can add, delete, and amend rules, regulations, and implementation as needed/desired, and shall advise the City Council of such amendments at its next regular or called meeting.

G. Means of Implementation:

Adoption of this Plan, Drought Contingency Ordinance, and any modification of the Plumbing Code Ordinance, will enable the City to implement and carry out enforcement of enacted ordinances to make the Plan an effective document.

PART 2: That if any provision or any section of this ordinance shall be held to be void or unconstitutional, such holding shall in no way affect the validity of the remaining provisions or sections of this ordinance, which shall remain in full force and effect.

PART 3: That any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine as provided in Section 1-4 of Tyler City Code. Each day such violation shall continue, or be permitted to continue, shall be deemed a separate offense. Since this ordinance has a penalty for violation, it shall become effective upon its publication in the newspaper as provided by Section 85 of the Charter of the City of Tyler, Texas, which date is expected to be June 27th, 2014.

PASSED AND APPROVED this 25th day of June, A.D., 2014

MARTIN HEINES, MAYOR OF
THE CITY OF TYLER, TEXAS

ATTEST:

For

CASSANDRA BRAGER, CITY CLERK



APPROVED:

DEBORAH G. PULLUM, CITY
ATTORNEY