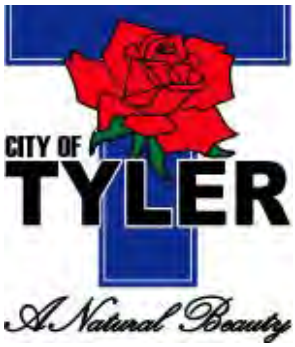


# CITY OF TYLER
# WATER CONSERVATION AND DROUGHT CONTINGENCY EMERGENCY DEMAND MANAGEMENT PLAN

5 YEAR UPDATE

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## SECTION I - INTRODUCTION

### CITY OF TYLER CODE SECTION 19-303

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 (BMPs) 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. In 2007 House Bill 4 amended the Texas Water Code by requiring the Texas Commission on Environmental Quality (TCEQ) to require retail public utilities that provide potable water to 3,300 or more connections to submit a Water Conservation Plan to the Texas Water Development Board and the TCEQ.

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. All Water Conservation Plans must be updated every five years and are required to send in annual information on the effectiveness of the Best Management Practices adopted. The Plan must include specific targets and goals developed by the utility using Best Management Practices or other strategies to reduce water waste, loss, and consumption. An additional requirement is that the utility set specific quantifiable targets and goals for water conservation and the Drought Contingency Plan has trigger points for the implementation and cancelling of the drought stages. The required goals are to be quantifiable and based on municipal use and residential use in gallons per capita per day. In 2013 a requirement for reporting of a Water Loss Report was established by Senate Bill 857.

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.

The Regional Water Planning Group, TCEQ, and the Texas Water Development Board are required to be sent the Conservation Plan Updates as well as the annual reports for Best Management Practice effectiveness.

## A. PLANNING AREA - PROPOSED PROJECT:

The planning area consists of the City of Tyler and its extraterritorial jurisdiction which contains approximately **57** square miles and approximately 693 miles of main lines. Tyler has an estimated current population of **104,798** (per the 2016 American Community Survey Estimate).

## B. WATER CONSERVATION AND DROUGHT 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. Best Management Practices (BMPs) will be implemented to aid in the reduction of per capita water usage to attempt to meet state established targets. Specific targets and goals have been developed by the utility, using the Best Management Practices (BMPs) 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 qualifying trigger points for the implementation of the drought stages. These required goals are to be quantifiable and based on municipal and residential use in gallons per capita per day.

## C. UTILITY EVALUATION DATA:

The following checklist provides a convenient method to insure that the most important items needed for the development of a conservation and an emergency demand plan program are considered.

| ***Utility Evaluation Data*** | ***Year 2018*** | |
|---|---|---|
| **Population of Service** | 103,700 | Persons |
| **Area of Service** | 57 | Square Miles |
| **Number of Retail Water Connections in service area** | 35,514 | Connections |
| **Average net rate of new connection additions per year over last 5 years** | 386 | Connections |
| **Water Production** | 9,674,618,367 | Gallons |
| **Average Water Production for Last 5 years (2014 - 2018)** | 9,033,002,962 | Gallons |
| **Average Monthly Treated Water Provided to Retail Customers for Last 5 years** | 575,403,433 | Gallons |
| **Estimated Monthly Sales** | $1,717,913.79 | Dollars |
| **Percentage of Residential and Commercial Connections Metered** | 100 | Percent |
| **Average annual revenues from water rates (Calendar Year 2014-2018)** | $19,934,856.88 | Dollars |
| **Average annual revenue from non-rate derived sources** | None | |
| **Average annual water revenues for other purposes:** | None | |

## MONTHLY METERED AMOUNTS AND REVENUE FOR 2018

| *Month* | *Metered (gallons)* | *Revenue* |
|---|---|---|
| **January** | 459,670,000 | $ 1,423,907.10 |
| **February** | 343,327,000 | $ 1,149,416.05 |
| **March** | 417,289,000 | $ 1,369,722.19 |
| **April** | 391,323,000 | $ 1,262,378.22 |
| **May** | 448,035,000 | $ 1,391,122.96 |
| **June** | 814,500,000 | $ 2,239,204.44 |
| **July** | 846,220,000 | $ 2,194,484.33 |
| **August** | 1,073,362,000 | $ 2,786,260.01 |
| **September** | 823,964,000 | $ 2,204,197.07 |
| **October** | 605,283,000 | $ 1,733,787.04 |
| **November** | 439,386,000 | $ 1,382,383.51 |
| **December** | 358,923,000 | $ 1,128,505.28 |
| **TOTAL** | 7,021,282,000 | $ 20,265,368.20 |
| **AVERAGE** | 585,106,833 | $ 1,688,780.68 |

## WATER USE CHARACTERISTICS

| | | |
|---|---|---|
| **Average Monthly Water Use (2018)** | **585,106,833** | **Gallons/Month** |
| **Peak Daily Use (2018)** | **40,934,000** | **Gallons/Day** |
| ***Gallons Per Capita Per Day (GPCD) Water Use for Single Family and Multi-Family Units*** | | |
| **Year 2014** | **119** | **GPCD** |
| **Year 2015** | 108 | GPCD |
| **Year 2016** | **111** | **GPCD** |
| **Year 2017** | 100 | GPCD |
| **Year 2018** | **105** | **GPCD** |
| **Peak to Average Use Ratio** | 1.5449 | Average daily use/annual average daily use |
| **Unaccounted for Water (Water Loss)** | **16.42** | **Percent of water produced** |
| **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 | |
| **Peak Daily Design Capacity of Water System** | **65 Million Gallons Per Day** | |
| **Major High-Volume Customers** | Delek Refining Ltd., Walnut Grove WSC, UT-Tyler, Christus Mother Frances, Southern Utilities | |

## POPULATION AND WATER USE PROJECTIONS:

| *Year* | *Projected Population*[1] | *Projected Water Demand (gallons)* |
|---|---|---|
| **2020** | 104,698 | 10,192,369,500 |
| **2021** | 105,583 | 10,278,495,022 |
| **2022** | 106,475 | 10,365,348,305 |
| **2023** | 107,375 | 10,452,935,498 |
| **2024** | 108,282 | 10,541,262,803 |

[1]POPULATIONS WERE PROJECTED USING REGION I PROJECTIONS, WITH AN AVERAGE GROWTH RATE OF 0.85% ANNUALLY. WATER DEMAND CALCULATIONS INCLUDE THE WHOLE WATER GROUP POPULATIONS AT A SIMILAR GROWTH RATE, WITH AN AVERAGE DEMAND OF 230 GPCD.

## WATER RATE STRUCTURE/EXISTING RATE STRUCTURE:

"City of Tyler Water Rates"

CITY OF TYLER CODE SECTION 19-60. RATES

SEE APPENDIX B

## APPLICABLE LOCAL REGULATIONS:

None

## 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:

- Texas Commission on Environmental Quality
- Texas Water Development Board
- Texas Department of Health
- Environmental Protection Agency

# D. NEEDS AND GOALS:

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 our future needs in the City of Tyler.

Homeowner and customer 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. Previously, the City of Tyler has included the Water Conservation Plan and it's components into the Tyler City Code. This code will be amended to include this 5 Year Updated Water Conservation and Drought Contingency/ Emergency Demand Management Plan and approved, as required, by the City Council.

Tyler, through customer education, city maintenance and operation, and implementation of planning elements, had originally established dual goals for the reduction of water waste, water loss and usage. These goals have been updated using 2014 through 2018 utility data information:

Based on the historic five-year average of municipal water use of 230 gallon per capita per day (gpcd), a five-year goal to reduce the municipal water use by one percent (1%) annually, or to 217 gpcd, and a ten-year goal to reduce the municipal water use by ten percent (10%) to 206 gpcd has been set.

Based on 2018 residential water use of 105 gpcd, the residential water use goals are a three percent (3%) reduction to 102 gpcd over five years and a ten-year goal to reduce residential water usage by 6 percent (6%)

or 99 gpcd. During this 5-year update the City of Tyler has established these new goals based on corrected historical data to ensure the metrics are quantifiable and achievable.

Based on the 2018 municipal water loss of 40 gpcd, the five-year goal for municipal water loss is set at 38 gpcd, or a five percent reduction, and the ten-year goal is to reduce water loss by 10 percent, for a goal of 36 gpcd. Goals will be met by continued implementation of the included best management practices and from other outlined planning elements.

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 Lake Palestine Water Treatment Plant, to allow for future growth for the service area.

## E. PUBLIC INVOLVEMENT:

The City of Tyler City Council meets on a regular basis on the 2nd and 4th Wednesday of each month at 9:00 am. 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.

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.

## F. RECORD MANAGEMENT SYSTEM

The city of Tyler has a record management system which allows for the classification of sales and uses into the most detailed level of water use data currently available to it, including lists in the sectors listed in clauses (i)- (vi) of (30 TAC 288.2 (a) (1)(B):

1. Residential
    a. Single family;
    b. Multi family;
2. Commercial;
3. Institutional;
4. Industrial;
5. Agricultural/ Irrigation; and,
6. Wholesale.

# SECTION II - WATER CONSERVATION PLAN & BEST MANAGEMENT PRACTICES

## CITY OF TYLER CODE SECTION 19-304

The following planning elements have been developed in accordance with the requirements listed in TCEQ regulations and include guidelines by the Texas Water Development Board and the Water Conservation Implementation Task Force.

## A. BEST MANAGEMENT PRACTICES

The Best Management Practices (BMPs) that have been adopted and implemented by the City of Tyler are:

1. Educational BMP
2. Plumbing Codes BMP
3. Water Conservation Retrofit Program
4. Conservation Oriented Water Rate Structure
5. System Water Audit and Water Loss BMP
6. Industrial Alternate Sources and Reuse BMP
7. Metering of All Connections and Retrofit of Existing Connections BMP
8. Prohibition on Wasting Water BMP
9. Industrial Site Specific Conservation BMP
10. Cooling Towers BMP

### 1. EDUCATIONAL BEST MANAGEMENT PRACTICE

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

The initial program consisted of the activities listed:

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

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 were available at Tyler Water Utilities Office and certain brochures were mailed directly to the customer. One of the brochures targeted one particular household water using appliance and included specific measures for conserving water.

Made 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 were available at the Tyler Water Utilities Office.

The revised program consists of the following listed activities:

Updates to the water conservation portion of the Tyler Water Utilities webpage explaining ways that water conservation can be achieved at home.

Brochures relating to outside household use, and car washing and lawn watering are available to customers in the TWU office and made available either by mail out, pick-up or via the City's web page.

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.

Take home folders will continue to be produced and distributed to area Tyler Independent School District that educates on the water cycle and the importance of conservation. The target goal is to reach 10% of students on an annual basis, based on a tiered program.

Educational tours of the water and wastewater treatment facilities will continue to be 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.

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.

## IMPLEMENTATION

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.

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

The third year of implementation targeted the area high schools and higher education facilities. Tours for this level were made available. Materials and other programs are made available for the educational tours, as necessary.

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.

Documentation of the educational materials and type of materials that are made available to the schools, groups, clubs and other organizations and are kept on file and reported annually. The report includes the approximate percent of students reached by the distribution of such materials. This information will also be reported on the required annual reports to TCEQ and TWDB.

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

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

## 2. PLUMBING CODES

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

## 3. 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. This is accomplished by mail, and/or the website, 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.

## 4. CONSERVATION ORIENTED WATER RATE STRUCTURE CITY OF TYLER CODE SECTION 19.60

Currently, the City of Tyler's rate structure is a "Declining Block" Rate Structure. The Declining Block Rate Structure is cost-based and does not encourage the excessive use of water. Tyler uses a declining block rate structure because it reflects the manner in which costs are incurred and equitably allocates these costs among the various types of customers served. The City is currently reviewing this rate structure and plans to convert to an inclining block rate design to conform to TCEQ regulations and TWDB guidelines, with a proposed implementation date of October 1, 2019.

## 5. SYSTEM WATER AUDIT AND WATER LOSS

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.

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. In 2018, the City of Tyler has a water loss of approximately 17%. 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. However, with infrastructure in the state it is, water loss is an issue. The City has begun an extensive line repair program, primarily replacing old 2-inch diameter water lines with larger diameter lines. This program, in addition to our water loss audit will help us determine areas in which we can improve, and hopefully bring our water loss percentages below 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, and then determines the areas of concern and the proper conservation techniques to implement to reduce the water loss percentage and report this information to the appropriate agency. The City of Tyler's goal is to have an Infrastructure Leakage Index (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.

Several phases of the "bottom-up" portion of the water audit have been implemented by TWU. 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. This has helped in the current reduction of the percentage of unaccounted water loss.

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.

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

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

## 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:

a. A utility system water model was prepared. The system model is instrumental in assessing large leakage loss amounts, system pressures and confirming pressure zones. This is updated with new connections on a regular basis.
b. 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.
c. 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.

d. A leak detection program was started including training for all water utilities staff.
e. Staff performs leak surveys in addition to the regular inspections of the water mains and connections.
f. Leaks are tracked by the Utilities Department for water loss estimation, time from report to repair, and volume of leak.
g. Customer complaints/ reports of leakage, taste and odor and all other complaints are kept on file with the Utilities Department.

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 include the following procedures:

a. Failed meters will be replaced when located.
b. Meters replaced through the City's contract with Aqua-Metric have a ten year warranty.
c. 2 % of meters will be tested annually and must be within 5% accuracy.
d. All municipal connections will be metered for increased accuracy of water use.
e. A street cleaner water use tracking method has been put in place and monitored.
f. Unauthorized taps or water thefts are assessed a charge for the illegal tap, and the city proceeds with disconnection of the illegal tap.

### WATER AUDITS AND LEAK DETECTION

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.

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 leak 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.

## 6. METERING OF ALL CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS BMP

The City of Tyler currently is metering all connections. An aggressive meter replacement program is in place to replace those meters that are unread or are malfunctions and do not register with the City's AMI program. This enables the City to more accurately track water consumption and identify those connections that are utilizing the most water.

## 7. INDUSTRIAL ALTERNATE SOURCES AND REUSE OF PROCESS WATER

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.

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.

## 8. PROHIBITION ON WASTING WATER

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.

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 of the importance of water conservation.

## 9. INDUSTRIAL SITE SPECIFIC CONSERVATION

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

## 10. 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.

## B. MEANS OF IMPLEMENTATION AND ENFORCEMENT

### CITY OF TYLER CODES SECTION 19-301/ 19-302

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:

a. Refusing to provide taps for customers who do not meet requirements for Water Conservation fixtures as established by adopted international Plumbing Code.
b. Nonpayment of water bills will initiate prompt discontinuation of service. The customer's service will be disconnected and a fee will be assessed for re-activation of the meter.
c. Analysis of water rates and adjusting rates as deemed appropriately by the City Council.
d. Immediate repair of leaks or the service will be shut off until the leak has been properly fixed (currently in a City Ordinance).
e. 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 meters that were used for the illegal tap.

## C. 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.

### INCLUDED IN EACH WHOLESALE WATER CONTRACT ENTERED INTO OR RENEWED, ARTICLE 6 SHALL INCLUDE THE FOLLOWING:

*6.3 Water Conservation: Wholesale Water Buyer shall cooperate with and assist Tyler in its efforts to develop and implement plans, programs, and rules to develop water resources and to promote practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in use of water, or increase the recycling and reuse of water. This may include the development of any conservation rationing plans by either Tyler or Wholesale Water Buyer that may be necessary or appropriate to address operational constraints, whether or not the same are required by any state or federal regulatory agency. Wholesale Water Buyer agrees to develop and implement drought contingency and conservation plans or measures required by federal or state agencies or other regulatory jurisdictions, including but not limited to 30 TAC Section 288.2 (a)(2) and (3). The buyer shall provide a copy of such plans to Tyler within ten (10) days of Plan implementation date. Such Plans shall be consistent with and as stringent as Tyler's adopted Plans. If Tyler determines that the Buyer's plans do not meet this standard, Tyler shall notify the Buyer of the deficiency in writing. The Buyer shall then amend its plans to and re-submit the Plans for Tyler's review.*

## D. 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 and the Texas Water Development Board and Regional Water Planning Group, annually. The report to the agency(s) 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
    c. Unaccounted for water and water loss as a whole
    d. Water pumped, water sold and water consumed
    e. Per capita per day results for municipal and residential goals
    f. List of public information released during the year.

# SECTION III - EMERGENCY DEMAND MANAGEMENT PLAN

### CITY OF TYLER CODE SECTION 19-305

## 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.

### MILD DROUGHT CONDITIONS ARE REACHED 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.

### 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 2.5 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.

### SEVERE DROUGHT CONDITIONS ARE 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 tank 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.

### EMERGENCY WATER SHORTAGE CONDITION ARE REACHED WHEN:

1. Major water line breaks, or pump or system failures occur which cause unprecedented loss of capability to provide water service; or when
2. Natural or man-made contamination of water supply (s) has occurred.

## B DROUGHT CONTINGENCY MEASURES:

The Water Conservation Drought Contingency 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):

1. Open the developed Information Center and designate the responsible information person.
2. Advise public of condition and continually publicize any available information from City.
3. Encourage voluntary reduction of water use.
4. Contact commercial and industrial users and explain necessity for implementation of the Drought Contingency Plan and initiation of strict conservation methods.
5. Implementation of system oversight and make adjustments required to meet changing conditions.
6. Average daily water consumption will be reduced by 5% or 1.25 MGD.
7. During this Stage of the Plan, the wholesale Customers would be required to reduce their Average Daily demand by 5% or calculated gallons per day (actual reductions based on customer's Average Daily Demand).

## 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.)

1. Outdoor residential use of water will be permitted on specified days. Outdoor water usage shall be allowed every fourth (4th) 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.
2. The City Manager will monitor system function and establish hours for outside water use, depending upon system performance.
3. Information Center (City Hall) and publicity elements shall keep the public advised of curtailment status.
4. Commercial and industrial users will be visited to insure voluntary conservation has been initiated.
5. Average daily water consumption will be reduced by 10% or 2.5 MGD.
6. Wholesale water customers during this stage will be required to reduce their average daily demand by 10% or calculated gallons per day (actual reductions based on customer's Average Daily Demand).

## 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:

1. Vehicle washing, window washing, and outside watering (lawn, shrub, faucet dripping, garden, etc.)
2. 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.
3. Commercial users not listed and industrial users will be controlled to the extent dictated by the City Manager.
4. The average daily water consumption will be reduced by 25% or 6.25 MGD.
5. Wholesale water customers during this stage will be required to reduce their average daily demand by 15% or calculated gallons per day (actual reductions based on customer's Average Daily Demand).

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

## C. INFORMATION AND EDUCATION:

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 establish an information center, an information person, and shall utilize the most effective methods for information dissemination on a daily basis.

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:

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.

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:

### CITY OF TYLER CODE SECTION 19-301

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. If any provision or any section of this Plan shall be held to be void or unconstitutional, such holding shall in no way affect the validity of the remaining provisions or sections once adopted into an ordinance, which shall remain in full force and effect.

## H. WHOLESALE WATER BUYER

Included in each wholesale water contract entered into or renewed, Article 6 shall include the following to meet the requirements that water shortage will be distributed in accordance with TWC 11.039 (30 TAC 288.22(a)(8)):

6.3(a) Demand Management. If Tyler shall manage demand through rationing the use of water to its retail customers, then a proportional rationing of water supplied to (name of wholesale company) by Tyler shall be instituted, at Tyler's option. Rationing does not relieve buyer from its obligation to pay the monthly Demand Charge. See Exhibit below this section for approximate reductions based on Average Daily Demand.

| **Wholesale Connections (Average Daily Demand - ADD)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Stage I** | | **Stage II** | | **Stage III** | |
| | Average Daily Demand (Gallons) | Average Daily Demand (MGD) | 5 % ADD Reduction (Gallons) | 5 % ADD Reduction (MGD) | 10 % ADD Reduction (Gallons) | 10 % ADD Reduction (MGD) | 15 % ADD Reduction (Gallons) | 15 % ADD Reduction (MGD) |
| **Community Water** | 78,176 | 0.0782 | 3,909 | 0.0039 | 7,818 | 0.0078 | 11,726 | 0.0117 |
| **City of Whitehouse** | 68,281 | 0.0683 | 3,414 | 0.0034 | 6,828 | 0.0068 | 10,242 | 0.0102 |
| **Walnut Grove** | 538,829 | 0.5388 | 26,941 | 0.0269 | 53,883 | 0.0539 | 80,824 | 0.0808 |

6.3(b) Temporary Rationing. Where emergency conditions may dictate temporary conservation or rationing requirements not exceeding 180 days for either Tyler or the 2nd party of this contract, either party may implement any measures considered appropriate by it to alleviate the emergency conditions. If the buyer implements measures to alleviate an emergency condition, the buyer shall notify City of Tyler in writing within five (5) days. Action taken under this subsection of the wholesale water contract, does not relieve the buyer from its obligation to pay monthly Demand Charges.

## I. VARIANCE PROCEDURES:

Variances may be issued during water shortage periods when deemed necessary by City Staff and ultimately, by the City Manager.

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

Businesses must contact the Director of Utilities or staff at City of Tyler Water Utilities at 903-531-1238.

Once cleared by Water Utilities the request will be forwarded to the office of the City Manager for his final consideration and approval.

The system priority for water service is considered and divided in the following manner:

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

# APPENDIX A

## LEGAL AND REGULATORY COMPONENT

## UPDATED ADOPTED ORDINANCE (AUGUST 28, 2019)

**ORDINANCE NO. O-2019- 71**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TYLER, TEXAS, AMENDING CHAPTER 19, "UTILITIES", ARTICLE X, "WATER CONSERVATION /EMERGENCY DEMAND MANAGEMENT PLAN", OF THE CODE OF ORDINANCES OF THE CITY OF TYLER, TEXAS PROVIDING A SEVERABILITY CLAUSE; AND ESTABLISHING AN EFFECTIVE DATE.**

**WHEREAS**, it is the intent of the City Council to protect the public health, safety, and welfare; and

**WHEREAS**, municipalities may, under their police powers, enact reasonable regulations to promote the health, safety and welfare of citizens; and

**WHEREAS**, the City of Tyler is a home-rule municipality acting under its Charter adopted by the electorate pursuant to Article 11, Section 5 of the Texas Constitution and Chapter 9 of the Texas Local Government Code; and

**WHEREAS**, Texas Local Government Code Section 51.072(a) states that a home-rule municipality has full power of self-government; and

**WHEREAS**, Texas Local Government Code Section 51.072(b) provides that the grant of powers to a municipality under the Texas Local Government Code does not prevent, by implication or otherwise, the municipality from exercising the authority incident to self-government; and

**WHEREAS**, Section 1 of the Tyler City Charter states that the City of Tyler may make any and all rules and regulations by ordinances and resolutions; and

**WHEREAS**, Section 1 of the Tyler City Charter states that the City of Tyler may make and enforce local police, sanitary, and other regulations, and may pass such ordinances as may be expedient for maintaining and promoting the peace, good government and welfare of the City, and for the performance of the functions thereof; and

**WHEREAS**, Section 2 of the Tyler City Charter states that the enumeration of particular powers by the Charter shall not be held or deemed to be exclusive, but in addition to the powers enumerated in the Charter, the City shall have, and may exercise all other powers which, under the constitution and laws of Texas, it would be competent for the Charter specifically to enumerate; and

**WHEREAS**, Section 6 of the Tyler City Charter states that pursuant to the provisions of and subject only to the limitations imposed by the State law and the Charter, all of powers of the City shall be vested in an elective Council, which shall, among other duties, enact legislation; and

**WHEREAS**, Texas Local Government Code Section 51.001(1) provides that the governing body of a municipality may adopt, publish, amend, or repeal an ordinance, rule or police regulation that is for the good government, peace, or order of the municipality; and

**WHEREAS**, Texas Local Government Code Section 51.001(2) provides that the governing body of a municipality may adopt, publish, amend, or repeal an ordinance, rule or police regulation that is necessary or proper for carrying out a power granted by law to the municipality or to an office or department of the municipality; and

**WHEREAS,** the City Council has determined there is an urgent 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

**WHEREAS**, the City Council further determines that such a public need is of an emergency nature and the legal requirement of the 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 Tyler City Code Chapter 19, "Utilities", Article X., "Water Conservation/Emergency Demand Management Plan", Section 19-301 is hereby amended, and shall read as follows:

**Section 19-301. Implementation.**

In regards to implementation and enforcement of the 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. Stage 1 - Mild Drought conditions are reached when:**

1. Average daily water consumption reaches 85% 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 5% or 1.25 MGD.
3. Average daily water consumption of 85% has existed for a period of three days.
4. Weather conditions are to be considered in drought classification determination. Predicted long, hot, or dry periods are to be considered in impact analysis.
5. Wholesale Water Customers (WWCs) are required to reduce their Average Daily Demand by 5%, or a calculated gallons per day based on WWC's Average Daily Demand.

**b. Stage 2 - Moderate Drought conditions are reached when:**

1. Average daily water consumption reaches 90% of rated production capacity for three-day period. Production capacity is defined as on line capacity in case of failure or shut down of a water source.
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 ground storage tank is taken out of service during mild drought.
5. Storage capacity (water level) is not being maintained during period of 100% rated production period.
6. Existence of any preceding conditions listed above for a duration of 36 hours.
7. Wholesale Water Customers are required to reduce their Average Daily Demand by 10%, or a calculated gallons per day based on WWC's Average Daily Demand.

**c. Stage 3 - Severe Drought conditions are reached when:**

1. Average daily water consumption reaches 100% of production capacity for a 24-hour period. 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 conditions listed in Moderate Drought Classification occur 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.

8. Wholesale Water Customers are required to reduce their average daily demand by 15%, or a calculated gallons per day based on WWC's Average Daily Demand).

**d. Stage 4 - Critical Water Shortage conditions are reached when:**

1. Total Daily Water Demand equals or exceeds 70 million gallons for 3 consecutive days.
2. Major water line breaks, or pump or system failures occur which cause unprecedented loss of capability to provide water service.
3. Natural or man-made contamination of water supply(s) occurs.
4. Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses.

**e. Stage 5 - Emergency Water Shortage conditions are reached when:**

1. Major water line breaks, one of the water treatment facilities is rendered inoperable, or pump or system failures occur which cause unprecedented loss of capability to provide water service.
2. Total Daily Water Demand equals or exceeds 70 million gallons a day for five (5) consecutive days.
3. Natural or man-made contamination of water supply (s) occurs.
4. Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses.

**f.** In the event Stages 3, 4 or 5 conditions persist (Item c., Item d. and Item e. 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

g. The City of Tyler is forward thinking and is well prepared in the availability of water and water sources. Currently, the City of Tyler has three (3) major water sources available for high water demand and emergency drought events. The City operates two (2) surface water treatment plants. The primary source is Lake Tyler and Lake Tyler East which is treated and distributed by the Golden Road Water Treatment Plant. Lake Tyler/Lake Tyler East have a combined permitted water right for 40,325 acre feet per year. The Golden Road Plant is rated at twenty-eight (28) MGD. The City's secondary source is Lake Palestine and the city has 67,200 acre feet per year available from this source. Raw water is piped from Lake Palestine to the Lake Palestine Water Treatment Plant for treatment and distribution. The Lake Palestine water treatment plant is rated at thirty (30) MGD. The third source is 12 (active) deep ground water wells, however, only 10 of the wells are used regularly. Two of the wells are only operated in emergency conditions. The wells pull from the Carrizo/Wilcox Aquifer. The wells are used regularly and for backup. The wells have the combined capacity of approximately eight (8) MGD. Also, the city has Lake Bellwood, in the past used to supply raw water to industries, with 2,200

acre feet per year available. This is minor in comparison to the other 3 major sources of water the City has available to it. In case of a failure of one of the water treatment plants the other plant will take over water production for distribution. The wells will be circulated, and the elevated storage monitored, to help with peak and emergency demands during a drought, or other possible water shortage event.

(Ord. 0-2011-15, 2/23/11) (Ord. 0-2014-99, 10/22/14)(Ord. 0-2019-XX, 8/28/19)

**PART 2:** That Tyler City Code Chapter 19, "Utilities", Article X., "Water Conservation/Emergency Demand Management Plan", Section 19-303 is hereby amended, and shall read as follows:

**Section 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. In 2007 House Bill 4 amended the Texas Water Code by requiring the Texas Commission on Environmental Quality (TCEQ) to require retail public utilities that provide potable water to 3300 or more connections to submit a Water Conservation Plan to the Texas Water Development Board. The Plan must include specific targets and goals developed by the utility using Best Management Practices or other strategies to reduce water waste, loss, and consumption. These reduction goals are to be based on municipal use in gallons per capita per day.

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 for State Officials as well as the Environmental Protection Agency and other Federal agencies. All Water Conservation Plans must be updated every five years and are required to send in annual information on the effectiveness of the Best Management Practices adopted. The Regional Water Planning Group, TCEQ, and the Texas Water Development Board should be sent the Conservation Plan Updates as well as the annual reports for Best Management Practice effectiveness.

d. Planning Area - Proposed Project

The planning area consists of the City of Tyler and its extraterritorial jurisdiction which contains approximately 572 square miles. Tyler has a current population of 104,798 (per the 2016 American Community Survey Estimate).

e. Contingency Plan

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.

f. Utility Evaluation Data

The following checklist provides a convenient method to insure that the most important items needed for the development of a conservation and an emergency demand plan program are considered.

1. Utility Evaluation Data
   (a) Population of service area = 104,798 Persons
   (b) Area of service area = 527(Sq. mi.)
   (c) Number of Retail Water Connections in service area = 35,514 (Conn)
   (d) Net rate of new connection additions per year (new connections less disconnections) = 386 (Conn)
   (e) Water use information:
      (1) Water production for 2018 Approx. 9,674,618,367 (gal./yr.)
      (2) Average water production for last five years Approx. = 9,033,002,962 (gal./yr.)
      (3) Average monthly treated water provided to retail customers for last five years = 575,403,433(gal./mo.)
      (4) Estimated Monthly Sales = $1,717,913.79

Monthly metered amounts and revenue for 2018

| *Month* | *Metered (gallons)* | *Revenue* |
|---|---|---|
| **January** | 459,670,000 | $ 1,423,907.10 |
| **February** | 343,327,000 | $ 1,149,416.05 |
| **March** | 417,289,000 | $ 1,369,722.19 |
| **April** | 391,323,000 | $ 1,262,378.22 |
| **May** | 448,035,000 | $ 1,391,122.96 |
| **June** | 814,500,000 | $ 2,239,204.44 |
| **July** | 846,220,000 | $ 2,194,484.33 |
| **August** | 1,073,362,000 | $ 2,786,260.01 |
| **September** | 823,964,000 | $ 2,204,197.07 |
| **October** | 605,283,000 | $ 1,733,787.04 |
| **November** | 439,386,000 | $ 1,382,383.51 |
| **December** | 358,923,000 | $ 1,128,505.28 |
| **TOTAL** | 7,021,282,000 | $ 20,265,368.20 |
| **AVERAGE** | 585,106,833 | $ 1,688,780.68 |

(5) Average monthly water use (Res./Comm./Ind.) = 585,106,833 Gallons/Month

(6) Peak Daily Use (Res./Comm./Ind.) = 40,934,000 GPD

(7) Gallons Per Capita Per Day Water Use for Single Family and Multi-Family Units

| | | |
|---|---|---|
| Year 2014 | 119 | GPCD |
| Year 2015 | 108 | GPCD |
| Year 2016 | 111 | GPCD |
| Year 2017 | 100 | GPCD |
| Year 2018 | 105 | GPCD |

(8) Peak to average use ratio (average daily summer use divided by annual average daily use) = 1.54

(9) Unaccounted for water (% of water production) = 16.42%

(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 65 mgd

(h) Major high-volume customers: Christus Trinity Mother Frances Hospital, Delek Refining Ltd., Walnut Grove W.S.C., University of Texas at Tyler, and-Southern Utilities.

(i) Population and water use projections:

| *Year* | *Projected Population** | *Projected Water Demand (gallons)* |
|---|---|---|
| **2020** | 104,698 | 10,192,369,500 |
| **2021** | 105,583 | 10,278,495,022 |
| **2022** | 106,475 | 10,365,348,305 |
| **2023** | 107,375 | 10,452,935,498 |
| **2024** | 108,282 | 10,541,262,803 |

*Populations were projected using Region I projections, with an average growth rate of 0.85% annually. Water demand calculations include the wholesale water group populations at a similar growth rate, with an average demand of 230 gpcd.

(j) Percent of water supply connection in system metered: 100% Res. 100% Comm.

(k) Water rate structure/Existing rate structure: SEE "City of Tyler Water Rates", City Code Section 19-60

(l) Average annual revenues from water rates: (calendar years 2014-2018) $19,934,856.88

(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 State Health Services
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) and House Bill (HB) 2260. The plan has been prepared using guidelines, from the TWDB and TCEQ, which have been developed to meet requirements of State and Federal regulations.

3. Tyler, through customer education, city maintenance and operation, and implementation of planning elements, had originally established dual goals for the reduction of water waste, water loss and usage. These goals have been updated using 2014 through 2018 utility data information:

(a) Based on the historic five-year average of municipal water use of 230 gallon per capita day (gpcd), a five-year goal to a reduce the municipal water use by 1 % annually, or to 217 gpcd, and a ten-year goal to reduce the municipal water use by ten percent (10%) to 206 gpcd has been set.

(b)Based on 2018 residential water use of 105 gpcd, the residential water use goals

are a three percent (3%) reduction to 102 gpcd over five years and a ten-year goal to reduce residential water usage by 6 percent (6%) or 99 gpcd. During this 5-year update the City of Tyler has established these new goals based on corrected historical data to ensure the metrics are quantifiable and achievable.

(c) Based on the 2018 municipal water loss of 40 gpcd, the five-year goal for municipal water loss is set at 38 gpcd, or a five percent reduction, and the ten-year goal is to reduce water loss by 10 percent, for a goal of 36 gpcd. Goals will be met by continued implementation of the included best management practices and from other outlined planning elements.

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. 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. (Ord. 0-2011-15, 2/23/11) (Ord. O-2019-XX; 8/28/19)

**PART 3:** That Tyler City Code Chapter 19, "Utilities", Article X., "Water Conservation/Emergency Demand Management Plan", Section 19-304 is hereby amended, and shall read as follows:

**Section 19-304. Water Conservation Plan and Best Management Practices.**

a. The following planning elements have been developed in accordance with the requirements listed in TCEQ regulations and include guidelines 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
Contracts with Other Political Subdivisions
Record Management System
Annual Reporting (Ord. No. 0-2014-99; 10/22/14)

c. Educational Best Management Practice

The City of Tyler will inform 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. Program or activities will consist of the activities listed:

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

(b) An article will be placed in the local newspaper, correlated with Fact Sheet preparation and include information on how to acquire the "Homeowners Guide", highlights of water saving methods, and elaboration on available brochures. The brochures will 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 any guides and available materials on an annual basis.

2. The revised program will consist of the following listed activities:

(a) Updates to the water conservation portion of the Tyler Water Utilities webpage explaining ways that water conservation can be achieved at home.

(b) Brochures relating to outside household use, and car washing, lawn watering, correlated to weather predictions are available to customers in the TWU office 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.

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 are not 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.

e. Plumbing Codes

The City of Tyler currently uses the 2015 edition of the International Plumbing Code as the 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

City of Tyler Water Rate Structure

(30 TAC 288.2 (a)(1)(H))(City of Tyler Code Section 19.60)

Currently, the City of Tyler's rate structure is a "Declining Block" Rate Structure. The Declining Block Rate Structure is cost-based and does not encourage the excessive use of water. Tyler uses a declining block rate structure because it reflects the manner in which costs are incurred and equitably allocates these costs among the various types of customers served. Tyler reviews and updates its costs and usage patterns every five years and updates its rates accordingly. The City is currently reviewing this rate structure and plans to convert to an inclining block rate design to conform to TCEQ reg

h. System Water Audit and Water Loss

1. The city of Tyler will implement the System Water Audit and Water Loss BMP from the TCEQ and TWDB Best Management Practices Guidelines starting in the first year and 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" will be implemented to monitor the system for leaks. Records will be 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 will also be set up to monitor pressures throughout the system to aid in locating line leaks.

6. A computerized water model of the Tyler water system will be prepared and added to 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.
   (a) Staff performs leak surveys in addition to the regular inspections of the water mains and connections.
   (b) Leaks are tracked by the Utilities Department for water loss estimation, time from report to repair, and volume of leak.
   (c) 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:
   (a) Failed meters will be replaced when located.
   (b) Meters replaced through the City's contract with Johnson Controls have a ten year warranty.
   (c) 2 % of meters will be tested annually to be within 5% accuracy.
   (d) All municipal connections will be metered for increased accuracy of water use.
   (e) A street cleaner water use tracking method has been put in place and monitored.
   (f) Unauthorized taps or water thefts will be assessed a charge for the illegal tap, and 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. Service will be disconnected.

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**

1. 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.

2. All City of Tyler Wholesale Water Contracts include the following, under Article 6.3 Water Conservation and Demand Management:

"6.3 Water Conservation. Wholesale Water Buyer shall cooperate with and assist Tyler in its efforts to develop and implement plans, programs, and rules to develop water resources and to promote practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in use of water, or increase the recycling and reuse of water. This may include the development of any conservation rationing plans by either Tyler or Wholesale Water Buyer that may be necessary or appropriate to address operational constraints, whether or not the same are required by any state or federal regulatory agency. Wholesale Water Buyer agrees to develop and implement drought contingency and conservation plans or measures required by federal or state agencies or other regulatory jurisdictions, including but not limited to 30 TAC Section 288.2 (a)(2) and (3). The buyer shall provide a copy of such plans to Tyler within ten (10) days of Plan implementation date. Such Plans shall be consistent with and as stringent as Tyler's adopted Plans. If Tyler determines that the Buyer's plans do not meet this standard, Tyler shall notify the Buyer of the deficiency in writing. The Buyer shall then amend its plans to and re-submit the Plans for Tyler's review.

6.3(a) Demand Management. If Tyler shall manage demand through rationing the use of water to its retail customers, then a proportional rationing of water supplied to (name of wholesale company) by Tyler shall be instituted, at Tyler's option. Rationing does not relieve buyer from its obligation to pay the monthly Demand Charge. See Exhibit below this section for approximate reductions based on Average Daily Demand.

| Wholesale Connections (Average Daily Demand - ADD) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Stage I | | Stage II | | Stage III | |
| | Average Daily Demand (Gallons) | Average Daily Demand (MGD) | 5 % ADD Reduction (Gallons) | 5 % ADD Reduction (MGD) | 10 % ADD Reduction (Gallons) | 10 % ADD Reduction (MGD) | 15 % ADD Reduction (Gallons) | 15 % ADD Reduction (MGD) |
| **Community Water** | 78,176 | 0.0782 | 3,909 | 0.0039 | 7,818 | 0.0078 | 11,726 | 0.0117 |
| **City of Whitehouse** | 68,281 | 0.0683 | 3,414 | 0.0034 | 6,828 | 0.0068 | 10,242 | 0.0102 |
| **Walnut Grove** | 538,829 | 0.5388 | 26,941 | 0.0269 | 53,883 | 0.0539 | 80,824 | 0.0808 |

6.3.(b) Temporary Rationing. Where emergency conditions may dictate temporary conservation or rationing requirements not exceeding 180 days for either Tyler or the 2nd party of this contract, either party may implement any measures considered appropriate by it to alleviate the emergency conditions. If the buyer implements

measures to alleviate an emergency condition, the buyer shall notify City of Tyler in writing within five (5) days. Action taken under this subsection of the wholesale water contract, does not relieve the buyer from its obligation to pay monthly Demand Charges."

See Code Sections 19-278 - 19-280.

**q. Record Management System**

(30 TAC 288.2 (a) (1) (B);

The city of Tyler has a record management system which allows for the classification of sales and uses into the most detailed level of water use data currently available to it, including lists in the sectors listed in clauses (i)- (vi) of (30 TAC 288.2 (a) (1)(B):

(i) residential
  (I) single family;
  (II) multi family;
(ii) commercial;
(iii) institutional;
(iv) industrial;
(v) agricultural/ Irrigation; and,
(vi) wholesale.

**r. 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 Conservation Plan implementation.
2. Public response to plan implementation and operation.
3. Quantitative effectiveness with reference to:
   (a) System reduction
   (b) Reduction in customer or per capita use
4. List of public information released during the year. (Ord. 0-2011-15, 2/23/11) (Ord. No. 0-2014-99; 10/22/14) (Ord. No. O-2019-XX; 8/28/19)

**PART 4:** 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 5:** That this ordinance shall take effect immediately upon its adoption.

**PASSED AND APPROVED** this 28th day of August, A. D., 2019.

MARTIN HEINES, MAYOR
OF THE CITY OF TYLER, TEXAS

ATTEST:

CASSANDRA BRAGER, CITY CLERK

CITY OF TYLER SEAL TEXAS

APPROVED:

DEBORAH G. PULLUM,
CITY ATTORNEY

# APPENDIX B

## EXISTING ADOPTED ORDINANCE

# ARTICLE X. WATER CONSERVATION/EMERGENCY DEMAND MANAGEMENT PLAN – Existing Ordinances Unchanged

**Section 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 Water annually on the implementation and effectiveness of the plan in accordance with the outline set forth in the plan. (Ord. 0-2011-15, 2/23/11)

**Section 19-301. Updated 08/28/2019**

**Section 19-302. Penalties.**

Users of City 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. (Ord. 0-2011-15, 2/23/11)

**Section 19-303. Updated 08/28/2019**

**Section 19-305. Emergency Demand Management Plan.**

a. Threshold Condition

The Texas Commission on Environmental Quality Water suggests at least three (3) levels or conditions for determining degree of urgency for initiation of an Emergency Demand Management Plan. These three (3) levels plus two additional 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) Average daily water consumption of 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 classification is reached 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.

4. Critical Water Shortage Condition

(a) Requirements for initiation - The city will recognize that Critical water shortage condition exists when under Stage III or/and as defined in Section 19-276 of the Plan:

1. Major water line breaks, or pump or system failures occur which cause unprecedented loss of capability to provide water service; or when

2. Total Daily Water Demand equals or exceeds 70 million gallons a day for three (3) consecutive days.

3. Natural or man-made contamination of water supply (s) has occurred.

5. Emergency Water Shortage Condition

(a) Requirements for initiation - The city will recognize that an emergency water shortage condition exists when under Stage IV or/and as defined in Section 19-276 of the Plan:

1. Major water line breaks, one of the water treatment facilities is rendered inoperable, or pump or system failures occur which cause unprecedented loss of capability to provide water service; or when

2. Total Daily Water Demand equals or exceeds 70 million gallons a day for five (5) consecutive days.

3. Natural or man-made contamination of water supply (s) has occurred.

b. Drought Contingency Measures

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

1. Step I

Step I drought measures as related to mild drought conditions and will initiate the following listed action. (Listed action is volunteered 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.

(g) Wholesale water customers during this stage will be required to reduce their average daily demand by 5% or calculated gallons per day. (actual reductions based on customer's Average Daily Demand)

2. 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 fourth 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 required conservation methods have been initiated.

(e) Average daily water consumption will be reduced by 10% or 2.5 MGD.

(f) Wholesale water customers during this stage will be required to reduce their average daily demand by 10% or calculated gallons per day(actual reductions based on customer's Average Daily Demand)

3. Step III

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

(c) Street washing, fire hydrant flushing, filling of pools, watering of athletic fields and golf courses, and dust control sprinkling.

(d) Commercial users not listed and industrial users will be controlled to the extent dictated by the City Manager.

(e) Average daily water consumption will be reduced by 25% or 6.25 MGD.

(f) Wholesale water customers during this stage will be required to reduce their average daily demand by 15% or calculated gallons per day(actual reductions

based on customer's Average Daily Demand)

4. Step IV

Step IV curtailment shall be initiated upon the existence of Critical Water Shortage Conditions

Requirement for initiation - Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan and:

(a) When Total Daily Water Demand equals or exceeds 70 million gallons for three (3) consecutive days.

(b) Major water line breaks, or pump or system failures occur which cause unprecedented loss of capability to provide water service; or when

(c) Natural or man-made contamination of the water supply source(s) has occurred.

5. Step V

Step V curtailment shall be initiated upon the existence of Emergency Water Shortage Condition when:

(a) When Total Daily Water Demand equals or exceeds 70 million gallons for five (5) consecutive days.

(b) Major water line breaks, water treatment facility is rendered inoperable, or pump or system failures occur which cause unprecedented loss of capability to provide water service; or when

(c) Natural or man-made contamination of the water supply source(s) has occurred.

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

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. (Ord. 0-2011-15, 2/23/11) (Ord. 0-2014-54, 6/25/14) (Ord. No. 0-2014-99; 10/22/14)

**Sec. 19-306 - 309. Reserved.**

# APPENDIX C

## WATER UTILITY PROFILE

## AS SUBMITTED TO THE TWDB AND TCEQ

Texas Water Development Board

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

## CONTACT INFORMATION

Name of Utility: City of Tyler

Public Water Supply Identification Number (PWS ID): TX2120004

Certificate of Convenience and Necessity (CCN) Number: 10772

Surface Water Right ID Number: 24-A, 3237-A, 4853

Wastewater ID Number: 20319

Contact: First Name: Katherine Last Name: Dietz

Title: Manager, Water Utilities Systems

Address: P.O. Box 2039 City: Tyler State: TX

Zip Code: 75703 Zip+4: Email: kdietz@tylertexas.com

Telephone Number: 9039398716 Date: 6/24/2019

Is this person the designated Conservation Coordinator? (•) Yes ( ) No

Regional Water Planning Group: I

Groundwater Conservation District:

Our records indicate that you:

☐ Received financial assistance of $500,000 or more from TWDB

☑ Have 3,300 or more retail connections

☑ Have a surface water right with TCEQ

**A. Population and Service Area Data**

1. Current service area size in square miles: 57

Attached file(s):

| File Name | File Description |
|---|---|
| PWS_print.pdf | City of Tyler PWS Area |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. Historical service area population for the previous five years, starting with the most current year.

| Year | Historical Population Served By Retail Water Service | Historical Population Served By Wholesale Water Service | Historical Population Served By Wastewater Water Service |
|---|---|---|---|
| **2018** | 103,700 | 16,712 | 103,700 |
| **2017** | 103,700 | 160,090 | 103,700 |
| **2016** | 103,700 | 11,527 | 103,700 |
| **2015** | 105,000 | 11,527 | 105,000 |
| **2014** | 105,000 | 11,527 | 105,000 |

3. Projected service area population for the following decades.

| Year | Projected Population Served By Retail Water Service | Projected Population Served By Wholesale Water Service | Projected Population Served By Wastewater Water Service |
|---|---|---|---|
| **2020** | 104,698 | 16,712 | 104,698 |
| **2030** | 113,960 | 19,302 | 113,960 |
| **2040** | 123,250 | 22,294 | 123,250 |
| **2050** | 133,249 | 25,750 | 133,249 |
| **2060** | 143,427 | 29,741 | 143,427 |

4. Described source(s)/method(s) for estimating current and projected populations.

Region I Water User Group Projections for RWS. Used historical population for 2018 WWS, increased by average of 15.5% per decade based on Walnut Grove WSC anticipated population projections in Region I plan.

Texas Water Development Board

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

## B. System Input

System input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

| Year | Water Produced in Gallons | Purchased/Imported Water in Gallons | Exported Water in Gallons | Total System Input | Total GPCD |
|---|---|---|---|---|---|
| **2018** | 9,674,618,367 | 0 | 384,604,082 | 9,290,014,285 | 245 |
| **2017** | 8,412,494,898 | 0 | 319,512,245 | 8,092,982,653 | 214 |
| **2016** | 8,903,052,525 | 0 | 0 | 8,903,052,525 | 235 |
| **2015** | 9,197,382,653 | 0 | 458,956,566 | 8,738,426,087 | 228 |
| **2014** | 8,977,466,367 | 0 | 249,558,000 | 8,727,908,367 | 228 |
| **Historic Average** | 9,033,002,962 | 0 | 282,526,179 | 8,750,476,783 | 230 |

## C. Water Supply System

Attached file(s):

| File Name | File Description |
|---|---|
| City of Tyler Water System.docx | |

1. Designed daily capacity of system in gallons: 65,000,000

2. Storage Capacity

   2a. Elevated storage in gallons: 1,339,000

   2b. Ground storage in gallons: 8,500,000

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

**D. Projected Demands**

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

| Year | Population | Water Demand (gallons) |
|---|---|---|
| **2020** | 104,698 | 10,192,369,500 |
| **2021** | 105,583 | 10,278,495,022 |
| **2022** | 106,475 | 10,365,348,305 |
| **2023** | 107,375 | 10,452,935,498 |
| **2024** | 108,282 | 10,541,262,803 |
| **2025** | 109,197 | 10,630,336,474 |
| **2026** | 110,120 | 10,720,162,817 |
| **2027** | 111,050 | 10,810,748,193 |
| **2028** | 111,989 | 10,902,099,015 |
| **2029** | 112,935 | 10,994,221,752 |

2. Description of source data and how projected water demands were determined.

Population is estimated using Region I projections, with an average growth rate 0.85% growth annually. Water demand calculations include the wholesale water group populations at a similar growth rate, with an average demand of 230 gpcd.

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### E. High Volume Customers

1. The annual water use for the five highest volume **RETAIL customers.**

| Customer | Water Use Category | Annual Water Use | Treated or Raw |
|---|---|---|---|
| Delek | Industrial | 405,537,000 | Treated |
| UT-Tyler | Institutional | 111,203,000 | Treated |
| Christus Mother Frances | Institutional | 105,752,000 | Treated |
| Caldwell Zoo | Commercial | 53,670,000 | Treated |
| Trane | Industrial | 50,696,000 | Treated |

2. The annual water use for the five highest volume **WHOLESALE customers.**

| Customer | Water Use Category | Annual Water Use | Treated or Raw |
|---|---|---|---|
| Walnut Grove | Municipal | 191,991,000 | Treated |
| Southern Utilities | Municipal | 100,664,000 | Treated |
| City of Whitehouse | Municipal | 51,781,000 | Treated |
| Community Water | Municipal | 32,476,000 | Treated |

### F. Utility Data Comment Section

Additional comments about utility data.

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

## Section II: System Data

### A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

| Water Use Category Type | Total Retail Connections (Active + Inactive) | Percent of Total Connections |
|---|---|---|
| Residential - Single Family | 30,457 | 85.76 % |
| Residential - Multi-Family | 498 | 1.40 % |
| Industrial | 41 | 0.12 % |
| Commercial | 3,809 | 10.73 % |
| Institutional | 387 | 1.09 % |
| Agricultural | 322 | 0.91 % |
| **Total** | 35,514 | 100.00 % |

2. Net number of new retail connections by water use category for the previous five years.

| | Net Number of New Retail Connections | | | | | | |
|---|---|---|---|---|---|---|---|
| **Year** | **Residential - Single Family** | **Residential - Multi-Family** | **Industrial** | **Commercial** | **Institutional** | **Agricultural** | **Total** |
| **2018** | 0 | 5 | 0 | 0 | 0 | 7 | 12 |
| **2017** | 1,061 | 18 | 0 | 150 | 7 | 58 | 1,294 |
| **2016** | 0 | 0 | 0 | 0 | 0 | 20 | 20 |
| **2015** | 1,759 | 65 | 5 | 315 | 43 | 3 | 2,190 |
| **2014** | 0 | 0 | 0 | 0 | 0 | 22 | 22 |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

| Year | Residential - Single Family | Residential - Multi-Family | Industrial | Commercial | Institutional | Agricultural | Total |
|---|---|---|---|---|---|---|---|
| **2018** | 3,221,998,000 | 738,689,000 | 538,589,000 | 1,693,977,000 | 600,271,000 | 231,465,000 | 7,024,989,000 |
| **2017** | 3,115,060,000 | 661,299,000 | 485,365,000 | 1,231,605,000 | 566,847,000 | 209,617,000 | 6,269,793,000 |
| **2016** | 3,530,083,000 | 678,277,000 | 458,240,000 | 1,868,639,000 | 617,672,000 | 0 | 7,152,911,000 |
| **2015** | 3,401,697,000 | 741,393,000 | 742,058,000 | 1,799,512,000 | 563,146,000 | 0 | 7,247,806,000 |
| **2014** | 3,885,181,000 | 682,697,000 | 635,582,000 | 1,412,680,000 | 446,897,000 | 59,144,000 | 7,122,181,000 |

### C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

| Year | Total Residential GPCD |
|---|---|
| **2018** | 105 |
| **2017** | 100 |
| **2016** | 111 |
| **2015** | 108 |
| **2014** | 119 |
| **Historic Average** | 109 |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

**D. Annual and Seasonal Water Use**

1. The previous five years' gallons of treated water provided to RETAIL customers.

| Month | Total Gallons of Treated Water | | | | |
|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| January | 459,670,000 | 438,592,000 | 388,248,000 | 447,793,000 | 592,993,000 |
| February | 343,327,000 | 347,908,000 | 349,586,000 | 408,160,000 | 249,371,000 |
| March | 417,289,000 | 441,999,000 | 437,961,000 | 396,512,000 | 371,101,000 |
| April | 391,323,000 | 469,417,000 | 449,218,000 | 414,757,000 | 401,126,000 |
| May | 448,035,000 | 490,636,000 | 395,695,000 | 305,679,000 | 538,572,000 |
| June | 814,500,000 | 626,615,000 | 601,838,000 | 500,767,000 | 538,572,000 |
| July | 846,220,000 | 579,758,000 | 756,261,000 | 724,184,000 | 769,259,000 |
| August | 1,073,362,000 | 788,983,000 | 989,263,000 | 1,016,607,000 | 699,344,000 |
| September | 823,964,000 | 564,794,000 | 817,285,000 | 926,679,000 | 658,494,000 |
| October | 605,283,000 | 758,994,000 | 793,923,000 | 1,001,972,000 | 800,770,000 |
| November | 439,386,000 | 648,968,000 | 526,418,000 | 604,550,000 | 458,597,000 |
| December | 358,923,000 | 491,826,000 | 647,215,000 | 500,146,000 | 375,518,000 |
| Total | 7,021,282,000 | 6,648,490,000 | 7,152,911,000 | 7,247,806,000 | 6,453,717,000 |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. The previous five years' gallons of raw water provided to RETAIL customers.

| Month | Total Gallons of Raw Water | | | | |
|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 | 0 |
| April | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 |
| June | 0 | 0 | 0 | 0 | 0 |
| July | 0 | 0 | 0 | 0 | 0 |
| August | 0 | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 | 0 |
| October | 0 | 0 | 0 | 0 | 0 |
| November | 0 | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |

3. Summary of seasonal and annual water use.

| | Summer RETAIL (Treated + Raw) | Total RETAIL (Treated + Raw) |
|---|---|---|
| 2018 | 2,734,082,000 | 7,021,282,000 |
| 2017 | 1,995,356,000 | 6,648,490,000 |
| 2016 | 2,347,362,000 | 7,152,911,000 |
| 2015 | 2,241,558,000 | 7,247,806,000 |
| 2014 | 2,007,175,000 | 6,453,717,000 |
| Average in Gallons | 2,265,106,600.00 | 6,904,841,200.00 |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### E. Water Loss

Water Loss data for the previous five years.

| Year | Total Water Loss in Gallons | Water Loss in GPCD | Water Loss as a Percentage |
|---|---|---|---|
| **2018** | 1,525,120,942 | 40 | 16.42 % |
| **2017** | 1,076,636,154 | 28 | 13.31 % |
| **2016** | 864,257,258 | 23 | 9.71 % |
| **2015** | 227,660,446 | 6 | 2.60 % |
| **2014** | 871,598,987 | 23 | 9.99 % |
| **Average** | 913,054,757 | 24 | 10.41 % |

### F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

| Year | Average Daily Use (gal) | Peak Day Use (gal) | Ratio (peak/avg) |
|---|---|---|---|
| **2018** | 19,236,389 | 29718282 | 1.5449 |
| **2017** | 18,215,041 | 21688652 | 1.1907 |
| **2016** | 19,597,016 | 25514804 | 1.3020 |
| **2015** | 19,857,002 | 24364760 | 1.2270 |
| **2014** | 17,681,416 | 21817119 | 1.2339 |

### G. Summary of Historic Water Use

| Water Use Category | Historic Average | Percent of Connections | Percent of Water Use |
|---|---|---|---|
| **Residential - Single Family** | 3,430,803,800 | 85.76 % | 49.27 % |
| **Residential - Multi-Family** | 700,471,000 | 1.40 % | 10.06 % |
| **Industrial** | 571,966,800 | 0.12 % | 8.21 % |
| **Commercial** | 1,601,282,600 | 10.73 % | 23.00 % |
| **Institutional** | 558,966,600 | 1.09 % | 8.03 % |
| **Agricultural** | 100,045,200 | 0.91 % | 1.44 % |

Texas Water Development Board

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

**H. System Data Comment Section**

## Section III: Wastewater System Data

**A. Wastewater System Data**

Attached file(s):

| File Name | File Description |
|---|---|
| City of Tyler Wastewater System.docx | |

1. Design capacity of wastewater treatment plant(s) in gallons per day: 22,000,000

2. List of active wastewater connections by major water use category.

| Water Use Category | Metered | Unmetered | Total Connections | Percent of Total Connections |
|---|---|---|---|---|
| **Municipal** | | 24,416 | 24,416 | 92.02 % |
| **Industrial** | 2 | 13 | 15 | 0.06 % |
| **Commercial** | | 1,947 | 1,947 | 7.34 % |
| **Institutional** | | 156 | 156 | 0.59 % |
| **Agricultural** | | 0 | 0 | 0.00 % |
| **Total** | 2 | 26,532 | 26,534 | 100.00 % |

3. Percentage of water serviced by the wastewater system: 100.00 %

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

| Month | Total Gallons of Treated Water | | | | |
|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| January | 469,286,000 | 519,479,000 | 581,668,000 | 513,970,000 | 466,515,000 |
| February | 534,063,100 | 429,261,000 | 490,112,000 | 448,487,000 | 454,541,000 |
| March | 574,440,000 | 475,172,000 | 664,460,000 | 663,396,000 | 521,340,000 |
| April | 468,562,000 | 441,652,000 | 544,857,000 | 588,293,000 | 498,516,000 |
| May | 450,734,000 | 460,047,000 | 534,621,000 | 519,213,000 | 598,516,000 |
| June | 446,775,000 | 503,046,000 | 489,078,000 | 570,856,000 | 497,780,000 |
| July | 429,050,000 | 473,612,000 | 471,457,000 | 528,219,000 | 487,922,000 |
| August | 434,050,000 | 539,073,000 | 492,434,000 | 493,945,000 | 475,254,000 |
| September | 448,370,000 | 444,849,000 | 443,424,000 | 436,284,000 | 439,625,000 |
| October | 568,620,000 | 443,549,000 | 446,054,000 | 506,429,000 | 466,688,000 |
| November | 562,880,000 | 424,143,000 | 425,663,000 | 607,888,000 | 418,334,000 |
| December | 534,065,118 | 429,263,017 | 490,114,016 | 687,637,000 | 450,394,000 |
| Total | 5,920,895,218 | 5,583,146,017 | 6,073,942,016 | 6,564,617,000 | 5,775,425,000 |

5. Could treated wastewater be substituted for potable water?

○ Yes ◉ No

**B. Reuse Data**

1. Data by type of recycling and reuse activities implemented during the current reporting period.

| Type of Reuse | Total Annual Volume (in gallons) |
|---|---|
| On-site Irrigation | |
| Plant wash down | 428,410,000 |
| Chlorination/de-chlorination | 10,512,000 |
| Industrial | |
| Landscape irrigation (park,golf courses) | 0 |
| Agricultural | |
| Discharge to surface water | 5,920,895,218 |
| Evaporation Pond | 0 |
| Other | |
| Total | 6,359,817,218 |

# UTILITY PROFILE FOR RETAIL WATER SUPPLIER

**C. Wastewater System Data Comment**

Additional comments and files to support or explain wastewater system data listed below.

# Texas Commission on Environmental Quality

**Water Availability Division**
**MC-160, P.O. Box 13087 Austin, Texas 78711-3087**
**Telephone (512) 239-4691, FAX (512) 239-2214**

## Utility Profile and Water Conservation Plan Requirements for Municipal Water Use by Retail Public Water Suppliers

This form is provided to assist retail public water suppliers in water conservation plan assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

*Water users can find best management practices (BMPs) at the Texas Water Development Board's website http://www.twdb.texas.gov/conservation/BMPs/index.asp. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.*

**Contact Information**

| | | |
|---|---|---|
| Name of Water Supplier: | City of Tyler | |
| Address: | P.O. Box 2039, Tyler, TX 75701 | |
| Telephone Number: | (903) 939-8716 | Fax: ( ) |
| Water Right No.(s): | 24-A, 3237-A, 4853 | |
| Regional Water Planning Group: | I | |
| Water Conservation Coordinator (or person responsible for implementing conservation program): | Kate Dietz | Phone: (903) 939-8716 |
| Form Completed by: | Kate Dietz | |
| Title: | Manager, Water Utilities Systems | |
| Signature: | Kathrin M. Dietz | Date:08/30/2019 |

**A water conservation plan for municipal use by retail public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.2). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.**

# Utility Profile

## I. POPULATION AND CUSTOMER DATA

### *A. Population and Service Area Data*

1. Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN).

2. Service area size (in square miles): 57

   (Please attach a copy of service-area map)

3. Current population of service area: 103,700

4. Current population served for:

   a. Water 103,700

   b. Wastewater 103,700

5. Population served for previous five years:

| *Year* | *Population* |
|---|---|
| 2018 | 103,700 |
| 2017 | 103,700 |
| 2016 | 103,700 |
| 2015 | 105,000 |
| 2014 | 105,000 |

6. Projected population for service area in the following decades:

| *Year* | *Population* |
|---|---|
| 2020 | 104,698 |
| 2030 | 113,960 |
| 2040 | 123,250 |
| 2050 | 133,249 |
| 2060 | 143,427 |

7. List source or method for the calculation of current and projected population size.

   Region I Water User Group Projections used for Retail Water Service.

*B. Customer Data*

Senate Bill 181 requires that uniform consistent methodologies for calculating water use and conservation be developed and available to retail water providers and certain other water use sectors as a guide for preparation of water use reports, water conservation plans, and reports on water conservation efforts. A water system must provide the most detailed level of customer and water use data available to it, however, any new billing system purchased must be capable of reporting data for each of the sectors listed below. More guidance can be found at: http://www.twdb.texas.gov/conservation/doc/SB181Guidance.pdf

1. Quantified 5-year and 10-year goals for water savings:

| | *Historic 5-year Average* | *Baseline* | *5-year goal for year 2024* | *10-year goal for year 2029* |
|---|---|---|---|---|
| Total GPCD | 230 | | 217 | 206 |
| Residential GPCD | 105 | | 102 | 99 |
| Water Loss GPCD | 40 | | 38 | 36 |
| Water Loss Percentage | 17 | | 17 | 17 |

**Notes:**
Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365
Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365
Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365
Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100

2. Current number of active connections. Check whether multi-family service is counted as ☒ Residential or ☐ Commercial?

| *Treated Water Users* | *Metered* | *Non-Metered* | *Totals* |
|---|---|---|---|
| Residential | 30,955 | | 30,955 |
| Single-Family | 30,457 | | 30,457 |
| Multi-Family | 498 | | 498 |
| Commercial | 3,809 | | 3,809 |
| Industrial/Mining | 41 | | 41 |
| Institutional | 387 | | 387 |
| Agriculture | 322 | | 322 |
| Other/Wholesale | 4 | | 4 |

3. List the number of new connections per year for most recent three years.

| Year | 2018 | 2017 | 2016 |
|---|---|---|---|
| *Treated Water Users* | | | |
| Residential | 5 | 1,079 | 0 |
| Single-Family | 0 | 1,061 | 0 |
| Multi-Family | 5 | 18 | 0 |
| Commercial | 0 | 150 | 0 |
| Industrial/Mining | 0 | 0 | 0 |
| Institutional | 0 | 7 | 0 |
| Agriculture | 7 | 58 | 20 |
| Other/Wholesale | 0 | 0 | 0 |

4. List of annual water use for the five highest volume customers.

| *Customer* | *Use (1,000 gal/year)* | *Treated or Raw Water* |
|---|---|---|
| Delek Refinery | 405,537 | Treated |
| Walnut Grove WSC | 191,991 | Treated |
| UT-Tyler | 111,203 | Treated |
| Christus Mother Frances | 105,752 | Treated |
| Southern Utilities | 100,664 | Treated |

## II. WATER USE DATA FOR SERVICE AREA

*A. Water Accounting Data*

1. List the amount of water use for the previous five years (in 1,000 gallons).

   Indicate whether this is ☐ diverted or ☒ treated water.

| *Year* | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| *Month* | | | | | |
| January | 459,670 | 438,592 | 388,248 | 447,792 | 592,993 |
| February | 343,327 | 347,908 | 349,586 | 408,160 | 249,371 |
| March | 417,289 | 441,999 | 437,961 | 396,512 | 371,101 |
| April | 391,323 | 469,417 | 449,218 | 414,757 | 401,126 |
| May | 448,035 | 490,363 | 395,695 | 305,679 | 538,572 |
| June | 814,500 | 626,615 | 601,838 | 500,767 | 538,572 |
| July | 846,220 | 579,758 | 756,261 | 724,184 | 769,259 |
| August | 1,073,362 | 788,983 | 989,263 | 1,016,607 | 699,344 |
| September | 823,964 | 564,794 | 817,285 | 926,679 | 658,494 |
| October | 605,283 | 758,994 | 793,923 | 1,001,972 | 800,770 |
| November | 439,386 | 648,968 | 826,418 | 604,550 | 458,597 |
| December | 358,923 | 491,826 | 647,215 | 500,146 | 375,518 |
| **Totals** | 7,021,282 | 6,648,490 | 7,152,911 | 7,247,806 | 6,453,717 |

2. Describe how the above figures were determined (e.g, from a master meter located at the point of a diversion from the source or located at a point where raw water enters the treatment plant, or from water sales).

   Water Sales

3. Amount of water (in 1,000 gallons) delivered/sold as recorded by the following account types for the past five years.

| *Year* | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| *Account Types* | | | | | |
| Residential | 3,960,687 | 3,776,359 | 4,208,360 | 4,143,090 | 4,567,878 |
| Single-Family | 3,221,998 | 3,115,060 | 3,530,083 | 3,401,697 | 3,885,181 |
| Multi-Family | 738,689 | 661,299 | 678,277 | 741,393 | 682,697 |
| Commercial | 1,693,977 | 1,231,605 | 1,868,369 | 1,799,512 | 1,412,680 |
| Industrial/Mining | 538,589 | 485,365 | 458,240 | 742,058 | 635,582 |
| Institutional | 600,271 | 566,847 | 617,672 | 563,146 | 446,897 |
| Agriculture | 231,465 | 209,617 | 0 | 0 | 59,144 |
| Other/Wholesale | 248,608 | 235,468 | 254,661 | 262,353 | 249,558 |

4. List the previous records for water loss for the past five years (the difference between water diverted or treated and water delivered or sold).

| *Year* | *Amount (gallons)* | *Percent %* |
|---|---|---|
| 2018 | 1,525,120,942 | 16.42 |
| 2017 | 1,076,636,154 | 13.31 |
| 2016 | 864,257,258 | 9.71 |
| 2015 | 227,660,446 | 2.6 |
| 2014 | 871,598,987 | 10.41 |

*B. Projected Water Demands*

1. If applicable, attach or cite projected water supply demands from the applicable Regional Water Planning Group for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

| Year | Projected Demand in (1,000 gal/yr) |
|---|---|
| 2020 | 10,192,370 |
| 2021 | 10,278,495 |
| 2022 | 10,365,348 |
| 2023 | 10,452,936 |
| 2024 | 10,541,263 |
| 2025 | 10,630,337 |
| 2026 | 10,720,163 |
| 2027 | 10,810,748 |
| 2028 | 10,902,099 |
| 2029 | 10,994,222 |

Demands based on population estimated in Region I projections with an average annual growth rate of 0.85%. Demand includes wholes water user groups at similar growth rate, with an average demand of 230 gpcd.

## III. WATER SUPPLY SYSTEM DATA

*A. Water Supply Sources*

1. List all current water supply sources and the amounts authorized (in acre feet) with each.

| *Water Type* | *Source* | *Amount Authorized* |
|---|---|---|
| Surface Water | Lake Palestine, Lake Tyler and Lake Tyler East and Lake Bellwood | 109,725 |
| Groundwater | Carrizo Wilcox Aquifer | 24.55 |
| Other | | |

*B. Treatment and Distribution System (if providing treated water)*

1. Design daily capacity of system (MGD): 65

2. Storage capacity (MGD):

   a. Elevated 1.339

   b. Ground 8.5

3. If surface water, do you recycle filter backwash to the head of the plant?

   ☒ Yes ☐ No If yes, approximate amount (MGD): 0.85

## IV. WASTEWATER SYSTEM DATA

*A. Wastewater System Data (if applicable)*

1. Design capacity of wastewater treatment plant(s) (MGD): 22

2. Treated effluent is used for ☐ on-site irrigation, ☐ off-site irrigation, for ☒ plant wash-down, and/or for ☒ chlorination/dechlorination.

   If yes, approximate amount (in gallons per month): 36,576,833

3. Briefly describe the wastewater system(s) of the area serviced by the water utility. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

**City of Tyler Wastewater System**

The Wastewater Utilities department operates and maintains the City's two wastewater treatment plants, as well as 22 sewer lift stations throughout the wastewater collection system.

The City of Tyler owns and operates two wastewater treatment plants:

**Southside Wastewater Treatment Plant TPDES Permit No. WQ0010653002**
The Southside Wastewater Treatment Plant was constructed in 1955, with an original capacity of 3 mgd and has undergone several upgrades and expansions to bring it to its current treatment capacity of 9 mgd. This plant is an activated sludge plant, utilizing mechanical aeration to achieve advanced secondary treatment levels. The facility serves approximately 40% of the City and discharges treated effluent into West Mud Creek and thence to the Angelina River. The annual average daily flow into the plant is currently over 4 mgd.

**Westside Wastewater Treatment Plant TPDES Permit No. WQ0010653001**
The Westside Wastewater Treatment Plant was placed into operation in 1968 and was upgraded in 1990. It currently has a treatment capacity of 13 mgd. This facility is a trickling filter/activated sludge plant, utilizing carousel aeration to achieve advanced secondary treatment levels. The facility serves approximately 60% of the City and most of the industrial waste generated in the city discharges to this system. Effluent from the plant is discharged into Blackfork Creek, which flows into Praire Creek and thence to the Neches River. The average daily flow into the plant is currently over 7 mgd.

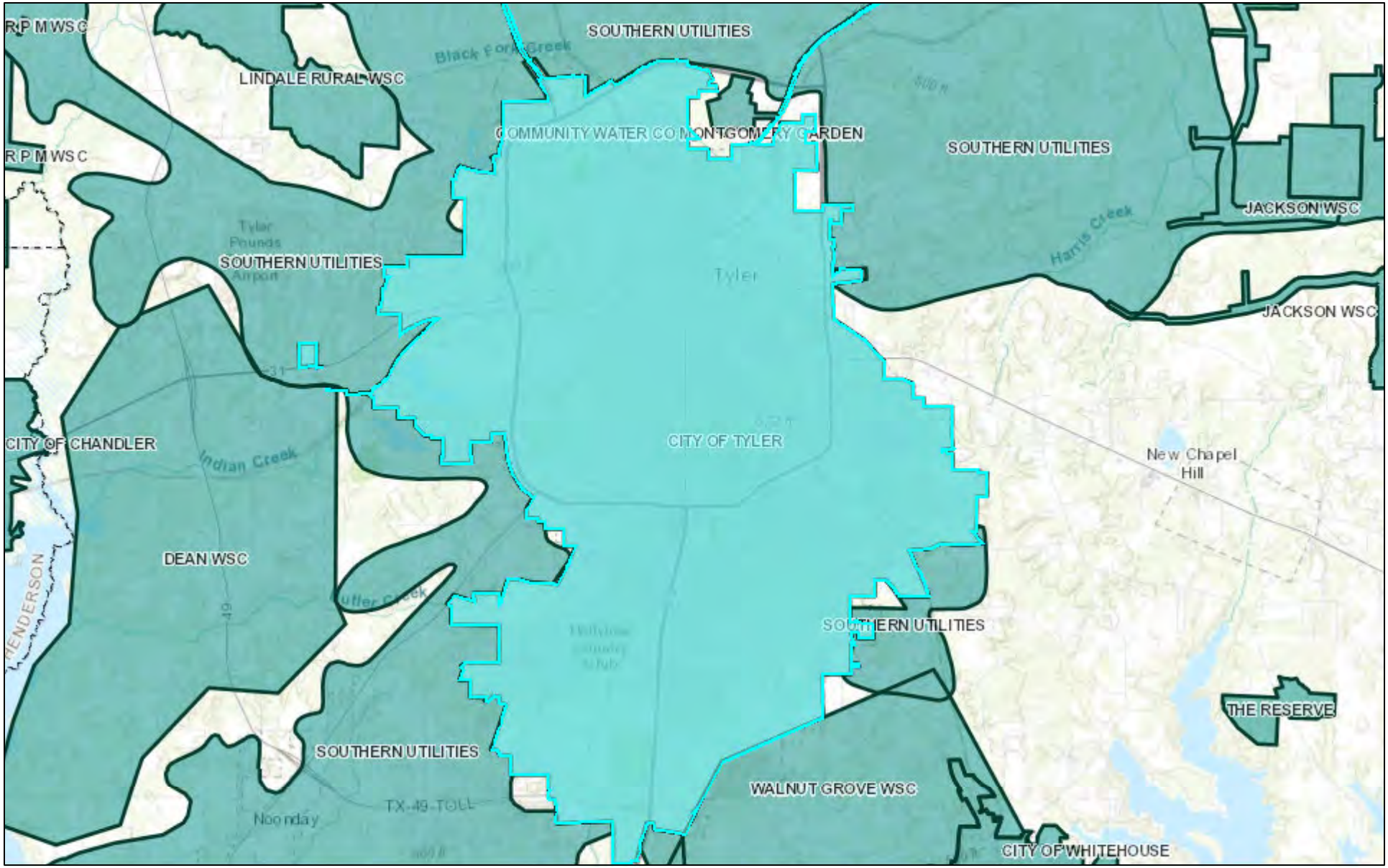
*B. Wastewater Data for Service Area (if applicable)*

1. Percent of water service area served by wastewater system: 100%

2. Monthly volume treated for previous five years (in 1,000 gallons):

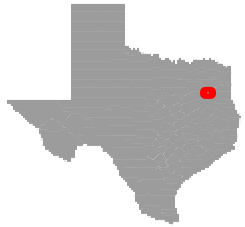
| *Year* | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| *Month* | | | | | |
| January | 469,286 | 519479 | 581,668 | 513,970 | 466,515 |
| February | 534,063 | 429,261 | 490,112 | 448,489 | 454,541 |
| March | 574,440 | 475,172 | 664,460 | 663,396 | 521,340 |
| April | 468,562 | 441,652 | 544,857 | 588,293 | 498,516 |
| May | 450,734 | 460,047 | 534,621 | 519,213 | 598,516 |
| June | 446,775 | 503,046 | 489,078 | 570,856 | 497,780 |
| July | 429,050 | 473,612 | 471,457 | 528,219 | 487,922 |
| August | 434,050 | 539,073 | 492,434 | 493,945 | 475,254 |
| September | 448,370 | 444,849 | 443,434 | 436,284 | 439,625 |
| October | 568,620 | 443,549 | 446,054 | 506,429 | 466,688 |
| November | 562,880 | 424,143 | 425,663 | 607,888 | 418,334 |
| December | 534,065 | 429,263 | 490,114 | 687,637 | 450,394 |
| **Totals** | 5,920,895 | 5,583,146 | 6,073,942 | 6,564,617 | 5,775,425 |

# City of Tyler Service Area




Texas Water Development Board

June 20, 2019

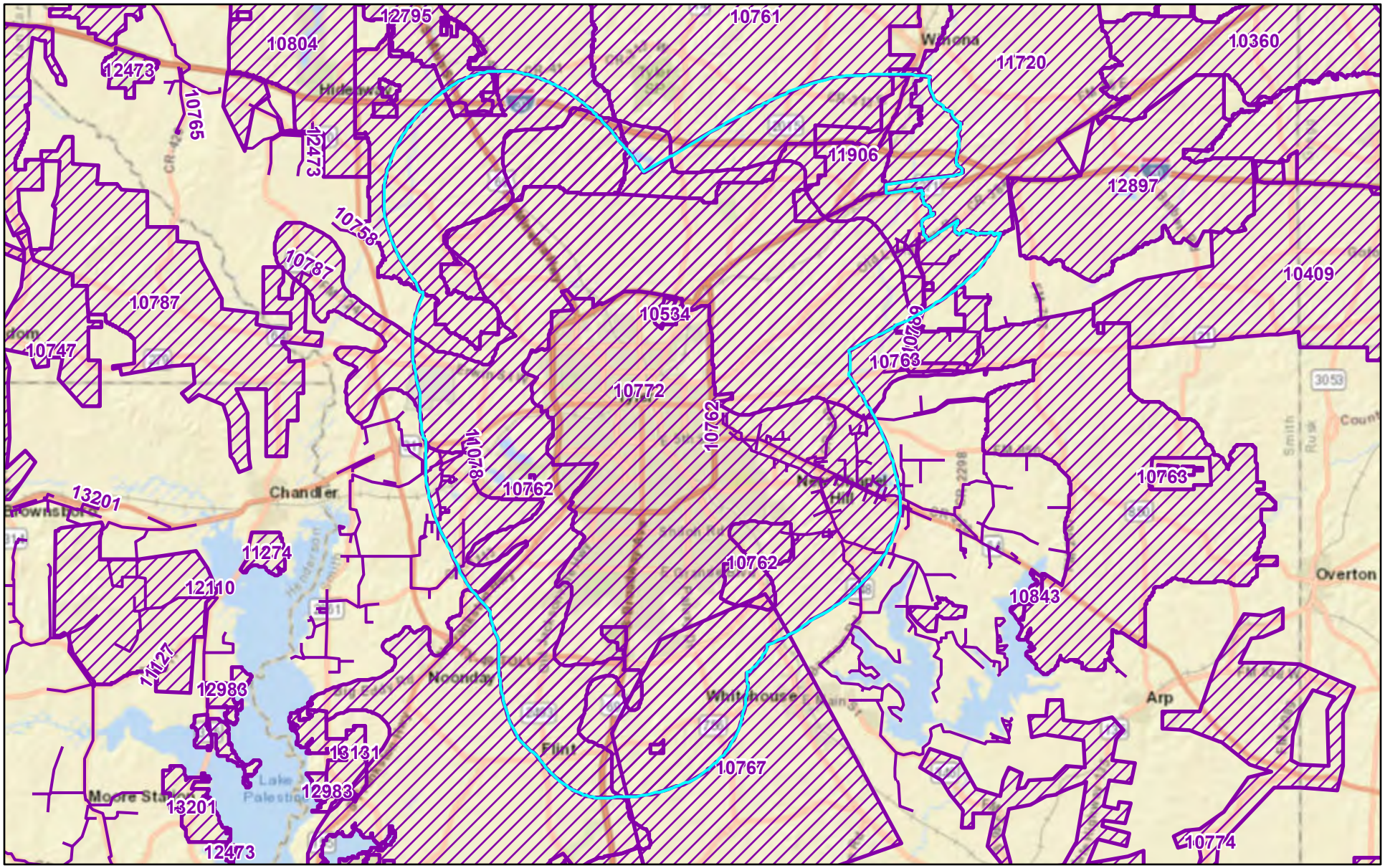


0 1.25 2.5 5 mi

0 2 4 8 km

1:144,448

# City of Tyler CCN - 10792




August 30, 2019

1:288,895

0 2 4 8 mi

0 3.25 6.5 13 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

# Water Conservation Plan

In addition to the utility profile, please attach the following as required by Title 30, Texas Administrative Code, §288.2. Note: If the water conservation plan does not provide information for each requirement, an explanation must be included as to why the requirement is not applicable.

A. *Record Management System*

The water conservation plan must include a record management system which allows for the classification of water sales and uses in to the most detailed level of water use data currently available to it, including if possible, the following sectors: residential (single and multi-family), commercial.

B. *Specific, Quantified 5 & 10-Year Targets*

The water conservation plan must include specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in gallons per capita per day. Note that the goals established by a public water supplier under this subparagraph are not enforceable. These goals must be updated during the five-year review and submittal.

C. *Measuring and Accounting for Diversions*

The water conservation plan must include a statement about the water suppliers metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply.

D. *Universal Metering*

The water conservation plan must include and a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement.

E. *Measures to Determine and Control Water Loss*

The water conservation plan must include measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.).

F. *Continuing Public Education & Information*

The water conservation plan must include a description of the program of continuing public education and information regarding water conservation by the water supplier.

G. *Non-Promotional Water Rate Structure*

The water supplier must have a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water. This rate structure must be listed in the water conservation plan.

H. *Reservoir Systems Operations Plan*

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies.

*I. Enforcement Procedure and Plan Adoption*

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

*J. Coordination with the Regional Water Planning Group(s)*

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

*K. Plan Review and Update*

A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

## VI. ADDITIONAL REQUIREMENTS FOR LARGE SUPPLIERS

Required of suppliers serving population of 5,000 or more or a projected population of 5,000 or more within the next ten years:

*A. Leak Detection and Repair*

The plan must include a description of the program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted for uses of water.

*B. Contract Requirements*

A requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

## VII. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements of 30 TAC §288.2(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

2. Adoption of ordinances, plumbing codes, and/or rules requiring water conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

3. A program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

4. A program for reuse and/or recycling of wastewater and/or graywater;

5. A program for pressure control and/or reduction in the distribution system and/or for customer connections;

6. A program and/or ordinance(s) for landscape water management;

7. A method for monitoring the effectiveness and efficiency of the water conservation plan; and

8. Any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

## VIII. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

2. evaluates conservation as an alternative to the proposed appropriation; and

3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

# APPENDIX D

## CURRENT UTILITY RATES

## FOR CITY OF TYLER, TEXAS

## DIVISION C. RATES

**Sec. 19-60. Water service rates.**

a. There is hereby established a minimum monthly water use charge based upon the size of the water meter installed as follows:

| **MIMIMUM MONTHLY RATES – INSIDE CITY** |
|---|

| **Meter size (in.)** | **October 1, 2018** |
|---|---|
| 5/8 | *13.16* |
| 1 | *13.16* |
| 1 1/2 | *13.16* |
| 2 | *15.73* |
| 3 | *18.46* |
| 4 | *29.02* |
| 6 | 43.81 |
| 8 | *59.67* |
| 10 | *85.03* |
| 12 | *110.38* |

| **MINIMUM MONTHLY RATES – OUTSIDE CITY** |
|---|

| **Meter size (in.)** | **October 1, 2018** |
|---|---|
| 5/8 | *19.74* |
| 1 | *19.74* |
| 1 1/2 | *19.74* |
| 2 | *23.60* |
| 3 | *27.69* |
| 4 | *43.53* |
| 6 | *65.72* |
| 8 | *89.51* |
| 10 | *127.55* |
| 12 | *165.57* |

(Ord 0-2003-42, 9-10-2003) (0-2005-77, 9-28-05) (0-2006-79; 9-13-2006) (0-2008-128; 9/24/08) (0-2008-155, 12/10/08) (Ord. 0-2009-103; 9/23/09) (Ord. No. 0-2010-99, 9/22/10) (Ord. 0-2012-69, 9/12/12) (Ord. No. 0-2014-86; 9/24/14) (Ord. No. 0-2015-91; 9/22/15) (Ord. No. O-2016-78; 9/14/2016) (Ord. No. 0-2017-77; 9/13/17) (Ord. No. 0-2018-69; 9/12/18)

b. Subject to the minimum monthly charges as provided in subsection a. above, the following rates per month shall be charged for water furnished:

CHARGE (per 1,000 gallons):

| Volume |
|---|
| **Volume Charge – Inside City (per 1k gal)** |

| **Volume** | **October 1, 2018** |
|---|---|

| | |
|---|---|
| First 2k | Min |
| Next 23k | 3.24 |
| Next 975k | 2.18 |
| Next 4mil | 1.81 |
| Over 5mil | *1.75* |

| Volume |
|---|
| **Volume Charge – Outside City (per 1k gal)** |

| **Volume** | **October 1, 2017** |
|---|---|
| First 2k | Min |
| Next 23k | 4.86 |
| Next 975k | 3.28 |
| Next 4mil | 2.71 |
| Over 5mil | *2.62* |

(Ord 0-2003-42, 9-10-2003) (0-2005-77, 9-28-2005) (0-2006-79; 9-13-2006) (0-2008-128; 9/24/08) (Ord. 0-2009-103; 9/23/09) (Ord. No. 0-2010-99, 9/22/10) (Ord. 0-2012-69, 9/12/12) (Ord. No. 0-2014-86; 9/24/14) (Ord. No. O-2016-78; 9/14/2016) (Ord. No. 0-2017-77; 9/13/17) (Ord. No. 0-2018-69; 9/12/18)

c. The monthly charge for private fire protection service shall be as follows:

| **FIRE LINE FEE** | |
|---|---|
| **Size (in)** | **October 1, 2018** |
| 4 A | *9.36* |
| 6 B | *20.47* |
| 8 C | *38.91* |
| 10 D | *92.91* |
| 12 E | *99.86* |

(0-2005-77, 9-28-2005) (0-2006-79; 9-13-2006) (Ord. 0-2009-103; 9/23/09) (Ord. No. 0-2010-99, 9/22/10) (Ord. 0-2012-69, 9/12/12) (Ord. No. 0-2014-86; 9/24/14) (Ord. No. O-2016-78; 9/14/2016) (Ord. No. 0-2017-77; 9/13/17) (Ord. No. 0-2018-69; 9/12/18)

Water used through a fire protection service for purposes other than testing of system shall be at a rate equal to three (3) times the applicable regular rate for service in City. (Ord 0-2003-42, 9-10-2003)

d. Rates for service outside City are based upon contract price between City and the individual customer which shall be one hundred fifty (150) percent of the rates for service within City.

e. A charge shall be made by the Division for each new tapping of the water mains for a connection, said charge to be determined by the size of the connection and the size of the meter. The fee for making taps and furnishing and installing meters and boxes shall be determined from the following schedule and shall be payable in advance. If a branch were requested with the tap installation on a one-inch tap or larger, a branch charge would be made including the tap charge plus the activation meter charge for each branch tap.

| **SCHEDULE OF WATER TAP AND METER ACTIVATION FEES** |
|---|

| **Size** | Tap and Meter Activation | Branch |
|---|---|---|
| 1” tap x 5/8” meter | *1617.00* | *340.00* |
| 1" tap x 1" meter | *1617.00* | *375.00* |
| 1½" tap x 1½" meter | *3068.00* | *688.00* |
| 2" tap x 2" meter | *3665.00* | *785.00* |

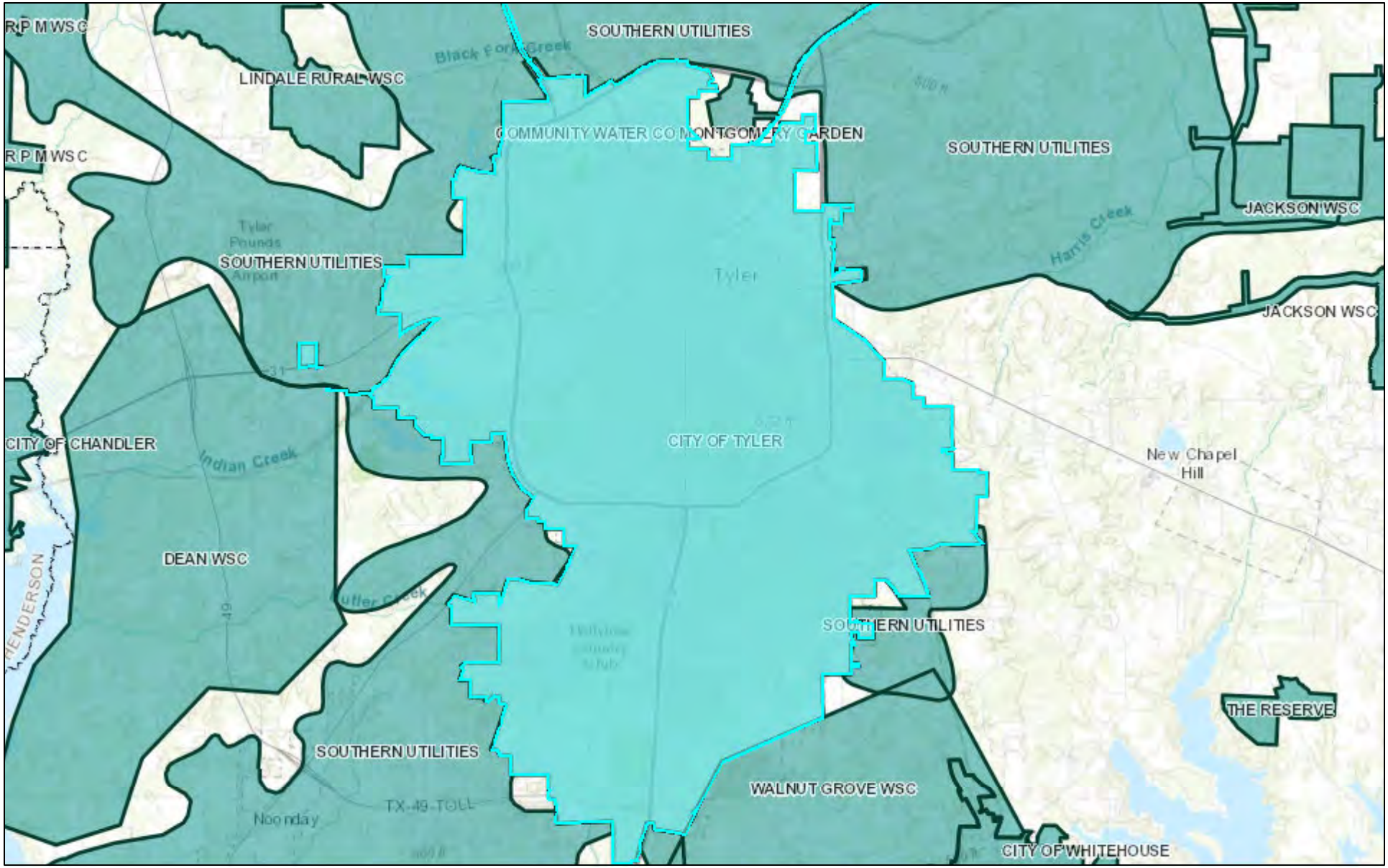
The tap fee shall include the cost of a tap and service connection from the main line to the meter location when the total length is fifty (50) feet or less and when installation is not by boring or tunneling under a street or other structure. In such cases, the cost of tap and meter shall be the actual cost of furnishing and installing the tap and meter plus a factor of 1.25 to cover overhead and administrative cost. This cost includes all labor, materials and equipment necessary to make the tap, run the service line and set the meter. Where the water tap has been installed according to Division standards by an approved water and sewer contractor, the following schedule shall determine the fee for furnishing the box and meter and installing the meter, said fee being payable in advance.

| **Size of Existing Tap** | Meter Size | Meter Activation Fee |
|---|---|---|

# APPENDIX E

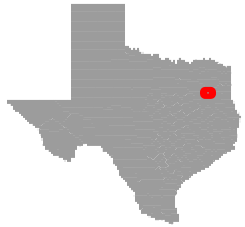
## SERVICE AREA MAP

# City of Tyler Service Area




Texas Water Development Board

June 20, 2019



0 1.25 2.5 5 mi

0 2 4 8 km

1:144,448

# APPENDIX F

## E-MAIL SUBMITTAL OF WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN TO REGION I WATER PLANNING GROUP

## Kate Dietz

**From:** Kate Dietz
**Sent:** Friday, August 30, 2019 2:07 PM
**To:** lann.bookout@twdb.texas.gov
**Cc:** kholcomb@anra.org; Jimmie L. Johnson; Shane Wheeler
**Subject:** City of Tyler Water Conservation Plan Submission
**Attachments:** City of Tyler 2019 Water Conservation Plan 5-year Update_red.pdf

**Tracking:**

| Recipient | Delivery |
|---|---|
| lann.bookout@twdb.texas.gov | |
| kholcomb@anra.org | |
| Jimmie L. Johnson | Delivered: 8/30/2019 2:11 PM |
| Shane Wheeler | Delivered: 8/30/2019 2:11 PM |

Lann –

Please see attached 5-Year update to the Water Conservation and Drought Contingency Plan for the City of Tyler, in the Region I Planning Area, for your review.

Thank you,

**Kate Dietz, P.E.**
Tyler Water Utilities
Manager, Water Utilities Systems
Office: 903-939-8716
Cell: 903-330-1431
www.cityoftyler.org