ORDINANCE NO. ____________

AN ORDINANCE AMENDING THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN OF THE CITY OF DENTON, TEXAS PREVIOUSLY ADOPTED BY THE CITY COUNCIL IN ORDINANCE NO. 2014-109 ENACTED ON THE 15TH DAY OF APRIL, 2014 AMENDING THE DROUGHT AND EMERGENCY RESPONSE STAGES OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; AMENDING THE ENFORCEMENT PROVISIONS OF MANDATORY RESTRICTIONS OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; PROVIDING FOR THE STAGES OF ENFORCEMENT FOR VIOLATORS OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; PROVIDING FOR RATES TO BE CHARGED FOR WATER USAGE IN THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN IN THE EVENT OF HIGH USAGE; PROVIDING FOR ADMINISTRATIVE FEES TO BE CHARGED TO VIOLATORS FOR CERTAIN VIOLATIONS OF THE DROUGHT CONTINGENCY PLAN; PROVIDING A CRIMINAL PENALTY NOT TO EXCEED $2,000 PER VIOLATION OF THE DROUGHT CONTINGENCY PLAN; PROVIDING A CIVIL PENALTY NOT TO EXCEED $1,000 PER DAY PER VIOLATION OF THE DROUGHT CONTINGENCY PLAN; PROVIDING CIVIL LEGAL REMEDIES FOR THE CITY OF DENTON, TEXAS; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council is cognizant of the persistent drought and near-drought conditions that can occur in this geographic area and is also aware that water supply in area lakes and reservoirs can become severely depleted; it further coming to the attention of the City Council that the City of Dallas, Texas enacted an ordinance that limits certain uses and the timing of such uses of water, and provides for violations of that ordinance; and

WHEREAS, §11.1271 and 11.1272 of the Texas Water Code and the applicable rules of the Texas Commission on Environmental Quality require the City to include specific, quantified five-year and ten-year targets for water savings and specific quantified targets for water use reductions during periods of water shortages and drought in the Water Conservation and Drought Contingency Plan; and

WHEREAS, on April 19, 2005, the City Council adopted the ordinance providing for the Water Conservation and Drought Contingency Plan for the City, by enacting Ordinance No. 2005-121; and

WHEREAS, on May 2, 2006, the City Council adopted the ordinance providing for the Amended Water Conservation and Drought Contingency Plan for the City, by enacting Ordinance No. 2006-127, by adding Appendix “G” to said plan, which was the “Lawn and Landscape Irrigation and Water Waste Ordinance”; and

WHEREAS, on June 2, 2009, the City Council adopted the ordinance providing for the further Amended Water Conservation and Drought Contingency Plan, by enacting Ordinance No. 2009-134, by including two additional Texas Water Development Board Best Management
Practices recommended by the Task Force's *Water Conservation Best Management Practices Guide* that relate to park and athletic field conservation; and

WHEREAS, on March 6, 2012 the City Council recognized that the amount of water available to the City and its water utility customers is limited, is subject to depletion and should be used efficiently; and the City Council desired to further amend the said Water Conservation and Drought Contingency Plan to include amendments to Sections 6.6 and 6.7 thereof; as evidenced by Ordinance No. 2012-064; and

WHEREAS, on April 15, 2014 the City Council adopted the ordinance providing for the further Amended Water Conservation and Drought Contingency Plan, by enacting Ordinance No. 2014-109, by adjusting the four-stage drought contingency plan to a three-stage plan; and

WHEREAS, the Public Utilities Board of the City of Denton, Texas after considering the proposed changes to the Water Conservation Plan and the Drought Contingency Plan, as contained in Exhibit “A” attached hereto and incorporated by reference herein, unanimously approved the proposed changes at its public meeting on April 8, 2019; and

WHEREAS, the City Council received a presentation of this item at its public work session on April 9, 2019 and supported the proposed changes to the Water Conservation Plan and the Drought Contingency Plan; and

WHEREAS, on March 14, 2019, at 6:00p.m. at a public information meeting held at the Denton Civic Center, Staff provided an opportunity for the public to comment on the proposed changes to the Water Conservation Plan and the Drought Contingency Plan; and

WHEREAS, the City Council accordingly finds that this ordinance is necessary to protect the public health of the residents of the City of Denton, Texas, in accordance with §§54.001 and 54.004 of the Texas Local Government Code; and

WHEREAS, the City Council deems it in the public interest to adopt the following amendments to the Amended Water Conservation Plan and the Drought Contingency Plan adopted on April 15, 2014, by adopting the provisions attached in the “2019 Water Conservation and Drought Contingency Plan” that is attached hereto as Exhibit “A”, said Plans are incorporated by reference herewith; NOW, THEREFORE,

THE CITY COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

**SECTION 1.** The Preamble to this ordinance is incorporated by reference herewith, and made a part of this ordinance for all purposes.

**SECTION 2.** City of Denton Ordinance No. 2005-121, pertaining to the “Water Conservation and Drought Contingency Plan,” and codified in Chapter 26 of the Code of Ordinances of the City of Denton, Texas, at §§26-233 and 26-234, amended, by City of Denton Ordinance No. 2006-127, by adding to it Appendix “G”, which is the “Land and Landscape Irrigation and Water Waste Ordinance”; and as further amended by the “Water Conservation and
Drought Contingency Plan – April 2009” by City of Denton Ordinance No. 2009-134; and as further amended by the “April 2009 – Water Conservation and Drought Contingency Plan (updated February 2012)” by City of Denton Ordinance No. 2012-064; and as amended by the “April 2014 Water Conservation and Drought Contingency Plan (updated April 2014)” by City of Denton Ordinance No. 2014-109; and as now amended by this ordinance:


(a) Adoption of plans. The Water Conservation and Drought Contingency Plan of the City adopted dated April 19, 2005, and the previous amendment thereto adopted by ordinance dated May 2, 2006, and the "City of Denton - Water Conservation and Drought Contingency Plan - April 2009" are hereby adopted by reference herein; and the attached "City of Denton - Water Conservation and Drought Contingency Plan (updated February 2012); and the attached Water Conservation Plan and the Drought Contingency Plan (updated to April 2014); and “2019 Water Conservation and Drought Contingency Plan” is hereby added to, and incorporated by reference herewith, being attached as Exhibit “A” hereto, and made a part of this Code of Ordinances for all purposes, as if fully set forth herein (hereafter collectively referred to as the “Plan”).

Sec. 26-234. Criminal and Civil Penalties.

(a) A person commits an offense if he or she knowingly makes, causes, or permits a use of water contrary to the measures implemented in the Water Conservation Plan or the Drought Contingency Plan, as amended. For purposes of this section, it is presumed that a person has knowingly made, caused, or permitted a use of water contrary to the measures implemented if the mandatory measures have been implemented according to the Plan and any one of the following conditions apply:

1. The Plan prohibits the manner of use; or

2. The amount of water used exceeds the amount allowed by the Plan; or

3. The amount of use or the amount used violates the terms and conditions of a compliance agreement following a variance granted by the Assistant City Manager for Utilities; or

4. The violation of any provision of the “Land and Landscape Irrigation and Water Waste Ordinance”.

(b) The following penalty shall apply during Stage 3 of the Water Conservation Plan and the Drought Contingency Plan, as amended. Any person who knowingly violates any provision of this article shall, upon conviction, be punished by a fine not to exceed two thousand dollars ($2,000.00). Each day that one or more provisions in this Plan is violated shall be considered to be a separate offense.
(c) The City Attorney is authorized to commence an action for appropriate legal or equitable relief in a court of competent jurisdiction in addition to the penalty mentioned in the above Subsection (b). Such additional relief may include:

(1) An injunction to prevent a violation of this chapter, or of the Water Conservation and the Drought Contingency Plan, as amended;

(2) Recovery for expenses incurred by the City in responding to a violation of this Chapter, or of the Water Conservation or the Drought Contingency Plan, as amended;

(3) A civil fine of up to one thousand dollars ($1,000.00) per day for violations of §26-233 or for violations of the Water Conservation Plan or the Drought Contingency Plan, as amended;

(4) All other damages, costs, remedies and legal processes to which the City may be entitled.

SECTION 3. This ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances of the City of Denton, Texas, as amended, except when provisions of this ordinance are in direct conflict with the provisions of such ordinances and such Code. All conflicting provisions of such ordinances and such Code are hereby repealed to the extent of that conflict only.

SECTION 4. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable, and, if any phrase, clause, sentence, paragraph, or section of this ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutinalty shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this ordinance since the same would have been enacted by the City Council without the incorporation of this ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 5. This ordinance shall become effective fourteen (14) days from the date of its passage, and the City Secretary is hereby directed to cause the caption of this ordinance to be published twice in the Denton Record-Chronicle, the official newspaper of the City of Denton, Texas, within ten days of the date of its passage.

The motion to approve this ordinance was made by ___________________________ and seconded by ___________________________, the ordinance was passed and approved by the following vote [___ - ___]:

<table>
<thead>
<tr>
<th>Aye</th>
<th>Nay</th>
<th>Abstain</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mayor Chris Watts:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gerard Hudspeth, District 1:</td>
<td></td>
<td></td>
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<tr>
<td>Keely G. Briggs, District 2:</td>
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</table>
Don Duff, District 3:  
John Ryan, District 4:  
Deb Armintor, At Large Place 5:  
Paul Meltzer, At Large Place 6:  

PASSED AND APPROVED this the _____ day of ________________, 2019.

CHRISTOPHER WATTS, MAYOR

ATTEST:  
ROSA RIOS, CITY SECRETARY

By: ____________________________

APPROVED AS TO LEGAL FORM:  
AARON LEAL, CITY ATTORNEY

By: ____________________________
1. INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development in Region C have led to growing demands for water. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we make efficient use of existing supplies and make them last as long as possible. This will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers. The TCEQ guidelines and requirements for water suppliers are included in Appendix B. The City of Denton has adopted this water conservation and drought contingency plan pursuant to TCEQ guidelines and requirements.

The objectives of the water conservation plan are:

- To reduce water consumption.
- To reduce the loss and waste of water.
- To identify the level of water reuse.
- To improve efficiency in the use of water.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The objectives of the drought contingency plan are:

- To conserve the available water supply in times of drought and emergency.
- To maintain supplies for domestic water use, sanitation, and fire protection.
- To protect and preserve public health, welfare, and safety.
- To minimize the adverse impacts of water supply shortages.
- To minimize the adverse impacts of emergency water supply conditions.
2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

2.1 Conservation Plans

The TCEQ rules governing development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code, which is included in Appendix B. For the purpose of these rules, a water conservation plan is defined as:

“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).”

According to TCEQ rules, water conservation plans for public water suppliers must have a certain minimum content (Section 3), must have additional content for public water suppliers that are projected to supply 5,000 or more people in the next ten years (Section 4), and may have additional optional content (Section 5).

2.2 Drought Contingency Plans

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code, which is included in Appendix B. The rules for wholesale water suppliers are contained in Rule 288.22, included in Appendix B. For the purpose of these rules, a drought contingency plan is defined as:

“A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).”

The drought contingency plan for the City of Denton is contained in Section 6 of this water conservation and drought contingency plan.
3. MINIMUM REQUIRED WATER CONSERVATION PLAN CONTENT

The minimum requirements in the Texas Administrative Code for water conservation plans for public drinking water suppliers covered in this report are as follows:

- 288.2(a)(1)(A) – Utility Profile – Section 3.1 and Appendix C
- 288.2(a)(1)(B) – Specification of Goals Before May 1, 2005 – Section 3.2
- 288.2(a)(1)(C) – Specification of Goals After May 1, 2005 – Section 3.2
- 288.2(a)(1)(D) – Accurate Metering – Sections 3.3 and 3.4
- 288.2(a)(1)(E) – Universal Metering – Section 3.4
- 288.2(a)(1)(F) – Determination and Control of Unaccounted Water – Section 3.5
- 288.2(a)(1)(G) – Public Education and Information Program – Section 3.6
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 3.7
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 3.8
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 3.9, Appendix D
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 3.10 and Appendix E

TCEQ places additional requirements on wholesale water suppliers in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.5 of the Texas Administrative Code. This Rule is included in Appendix B.

TCEQ's minimum requirements for water conservation plans are addressed in the following subsections of this report:

- 288.5(1)(C) – Maximum Acceptable Unaccounted-For Water Goal – Section 3.5

3.1 Utility Profile

Appendix C to this water conservation plan is a water utility profile for the City of Denton, based on the format recommended by the TCEQ.²
3.2 Specification of Water Conservation Goal

Specific elements of the Water Conservation Plan are discussed in the subsequent sections of this document. The development of this plan involved the identification and examination of numerous conservation strategies. The conservation strategies chosen for the plan were derived from numerous sources including state agency recommendations, the Region C planning group, water conservation literature, and the City's existing Water Conservation Plan.

Prior to 2019, Denton's water conservation goal was a 15 percent reduction in per capita water use by 2050. This goal was established in Denton's Water Conservation and Drought Contingency Plan adopted December 7, 1999.

The City's water conservation goals after May 1, 2005 include the following:

- Achieve 2024 per capita water use of 152 gpcd or less, as shown in Table 3-2 (five-year target). This represents a reduction of 37 gpcd from year 2000 per capita water use.
- Achieve 2029 per capita water use of 152 gpcd or less, as shown in Table 3-2 (ten-year target). This represents a reduction of 37 gpcd from year 2000 per capita water use.

The City's conservation goal was articulated in 2005 as a one percent reduction yearly in per-capita usage for ten years. This goal was based on: 1) per-capita reduction goals recommended by the Texas Water Development Board's Task Force on Water Conservation; and 2) an indication in recent data that per capita water demand had started to decline. However, weather patterns over the same period of time were such that declining per capita consumption may have been weather related.

Denton's specific goal was mildly exceeded, with a per-capita savings by 2008 of 10 gpcd. This savings is a reflection of the effects of conservation programs referenced above as well as weather variability during years pasted.
<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Type</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
<th>2024</th>
<th>2029</th>
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<tbody>
<tr>
<td>City of Denton Population</td>
<td></td>
<td>111,814</td>
<td>120,820</td>
<td>133,610</td>
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<td>Gallons Per Capita per Day</td>
<td>gpcd</td>
<td>160</td>
<td>158</td>
<td>140</td>
<td>152</td>
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<td>Residential Gallons Per Capita per Day</td>
<td>gpcd</td>
<td>70</td>
<td>70.3</td>
<td>58.3</td>
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<td>Savings from Low-Flow Fixtures and Federal Clothes Washer Standard</td>
<td>gpcd</td>
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<td>Savings from Conservation Measures</td>
<td>gpcd</td>
<td></td>
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<td>2.5</td>
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<td>Savings from Reuse</td>
<td>gpcd</td>
<td></td>
<td></td>
<td>.5</td>
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<td>Projected Per-Capita Savings</td>
<td>gpcd</td>
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<tr>
<td>Projected Per-Capita Reduction</td>
<td>percent</td>
<td></td>
<td></td>
<td>5%</td>
<td>5%</td>
<td></td>
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<td>Actual Per-Capita Savings</td>
<td>gpcd</td>
<td>9</td>
<td>2</td>
<td>18</td>
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<tr>
<td>Actual Per-Capita Reduction</td>
<td>percent</td>
<td>15.4%</td>
<td>1.25%</td>
<td>11.4%</td>
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<td></td>
</tr>
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</table>
3.3 Accurate Metering of Raw Water Supplies and Treated Water Deliveries

The City of Denton meters all raw water diversions from Lake Lewisville and Lake Ray Roberts to each of the Water Treatment Plants. The City of Denton also meters all treated water deliveries to the distribution system from each water treatment plant. Each meter has an accuracy of plus or minus one percent. The meters are calibrated on a semiannual basis by City of Denton personnel to maintain the required accuracy and are repaired or replaced as needed. Replaced two of 4 in that last few years and two more are coming. Raw meters were replaced in 2018 Raw RR replaced on 5-22 and finished on 12-10. Lewisville plans to replace their soon.

3.4 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement

Water usage for all customers of the City of Denton, including public and governmental use, is metered. As part of the water conservation plan, the City of Denton will continue to implement a meter replacement program. Denton Water Utility (DWU) staff conducted an extensive study in 2004 in which over 2,000 water meters were bench tested for accuracy. Throughout the years since this study was conducted, it has been updated and holds validity in results. In addition a cost-benefit analysis was conducted in order to maximize the efficiency of the meters versus the costs of the replacement program. Based on the study, ¾ to 2-inch meters are replaced on a twelve- to fourteen-year cycle. The program focused on replacing the oldest meters in the system first. From 2009 to 2013 DWU has replaced meters to meet the twelve- to fourteen-year cycle. Meters that are 3-inch or larger are tested every year and repaired or replaced as necessary.

In addition, meters registering any unusual or questionable readings are automatically flagged in the billing process and be tested and repaired to restore full functionality.

3.5 Determination and Control of Water Loss

The amended 2003, Texas Water Code (Chapter 16.0121) requires that DWU (a retail public utility that provides potable water) to file an annual audit of system water loss. DWU continues to follow annually in compliance with the TWC.

DWU staff performs a yearly water audit, using the International Water Association/American Water Works Association (IWA/AWWA) method required by the TWDB. DWU staff has been conducting water audits since the early 1990s. Historically, the City of Denton’s non-revenue water, has always been below the AWWA goal. The City of Denton unaccounted-for water is also below the national average and the 2017
Texas average. The City of Denton’s system has always met the suggested targets of the newer IWA/AWWA methodology as specified by the TWDB Task Force on water conservation.

The City of Denton will continue to conduct annual water audits using the IWA/AWWA methodologies.

Non-revenue water for the City of Denton has varied from 3.3 percent to 7.5 percent in the last five years, with the highest value still under review regarding accuracy of a source meter. Previous audits led to the discovery and correction of a systematic source metering error at the Ray Roberts Water Treatment Plant. Staff will continue to conduct comprehensive water audits annually and take appropriate measure to minimize system water loss.

3.6 Public Education and Information; Partnerships with Non-profits

The City of Denton continues to have an active role in the education of water conservation with several methods of outreach and public information. Along with their Partnerships with Non-Profits, they execute campaigns throughout the year(s) to spread information on conservation. The continuing public education and information campaign and the partnerships with Non-Profit organizations on water conservation includes the following elements:

- Promote the City’s water conservation measures (presented in Sections 3, 4, and 5).
- Encourage voluntary twice-a-week watering schedule for landscape.
- Include inserts on water conservation with water bills at least twice per year. Inserts will include material developed by City of Denton staff and material obtained from the TWDB, the TCEQ, and other sources that pertain to water conservation, irrigation conservation, and protecting pipes from freezing.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Make the Texas Smartscape materials, water conservation brochures, and other water conservation materials available to the public at the City of Denton Utility Department, other City facilities, and at special events.
- Make information pertaining to water conservation and irrigation conservation available online at www.sustainabledenton.com and include links to the Texas Smartscape website and to information relating to water conservation on the TWDB and TCEQ websites.
- Provide a Xeriscape class once a year to promote conservation landscaping and conservation irrigation practices.
- Encourage attendance at Texas A&M Water University water classes. Offered options include Rain barrel and Drip irrigation classes.
- Promote and educate with non-profit conservation partners such as Master Naturalist, Master Gardeners, and Natural Plant Society, organizations that actively hold informational and educational meetings and volunteer opportunities regularly within our community.
- Offer presentations to local organizations, schools, and civic groups on the importance of water conservation and ways to save water.

3.7 Non-Promotional Water Rate Structure

With the intent of encouraging water conservation and discouraging waste and excessive use of water, the City of Denton adopted an increasing block (inverted-block) rate in 1998. In an inverted-block structure the unit price of water increases with increasing water use.

The City of Denton employs an inverted-block rate from May through October. The structure consists of four blocks (Table 5-2). The first block provides enough water to cover a typical household’s water usage, which includes a moderate amount for irrigation. The second, third, and fourth blocks are designed to curb discretionary and seasonal outdoor water use. The inverted-block structure only applies to residential customers. DWU bills commercial customers on a flat rate, but has implemented seasonal pricing on commercial irrigation meters to curb summer peak demand.

<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tbody>
<tr>
<td>DWU Residential Block Rate Structure</td>
</tr>
<tr>
<td>per thousand gallons</td>
</tr>
<tr>
<td>Less than 15,000 gals</td>
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<tr>
<td>15,001 – 30,000 gals</td>
</tr>
<tr>
<td>30,000-50,000 gals</td>
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<td>More than 50,000 gals</td>
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</table>

<table>
<thead>
<tr>
<th>TABLE 3</th>
</tr>
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<tbody>
<tr>
<td>DWU Seasonal Commercial Irrigation Rates</td>
</tr>
<tr>
<td>Winter (November-April)</td>
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<tr>
<td>$4.45 per thousand gallons</td>
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</table>
3.8 Reservoir System Operation Plan

The City of Denton has the right to divert water from Lake Lewisville and Lake Ray Roberts, which we limit to firm yield calculations as follows:

- 19.76 MGD from Lake Ray Roberts
- 4.34 MGD from Lake Lewisville

The City of Denton is the minority water right holder in both reservoirs. The current agreement with the City of Dallas (majority water right holder) delegates comprehensive coordination of reservoir management to the City of Dallas.

3.9 Implementation and Enforcement of the Water Conservation Plan

Appendix D contains a copy of the resolution of the City of Denton City Council adopting this water conservation and drought contingency plan. The resolution designates responsible officials to implement and enforce the water conservation and drought contingency plan.

3.10 Coordination with Regional Water Planning Group

The City of Denton will provide a copy of this water conservation and drought contingency plan to the Region C Water Planning Group, which is currently developing the Regional Water Plan. Appendix E includes a copy of a letter sent to the Chair of the Region C Water Planning Group.
4. ADDITIONAL REQUIRED WATER CONSERVATION PLAN CONTENT

The Texas Administrative Code also includes additional requirements for water conservation plans for public drinking water suppliers that serve a population of 5,000 people or more and/or a projected population of 5,000 people or more within the next 10 years:

- §288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 3.5, 4.1, and 5.5
- §288.2(a)(1)(B) – Record Management System – Section 4.2
- §288.2(a)(2)(C) – Requirement for Water Conservation Plans by Wholesale Customers – Section 4.3

4.1 Leak Detection and Repair; Pressure Control

Measures to control unaccounted-for water are part of the routine operations of the City of Denton. Meter readers, water and wastewater utility personnel, and the public report leaks in the system. Maintenance crews are on-call 24-hours a day and respond quickly to repair reported leaks. DWU has invested in leak detection and correlator equipment that helps in identifying more leaks and locating leaks more accurately for repair.

The City of Denton also proactively decreases water loss through the waterline replacement program. The City of Denton spends approximately 2 million per year to replace water distribution lines with two construction and maintenance crews. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement.

DWU will continue analysis on the life cycle of transmission lines. These pipes have an assumed lifespan of 75 years, however the role of these lines within the distribution system makes them critical. The DWU will assess the current condition of existing transmission lines, research pipe maintenance history, and review published research. As a result, DWU will revise the replacement schedule for all existing transmission lines. This is expected to reduce water loss from main breaks by better estimating end of useful live.

To reduce real water losses, the City of Denton will maintain a proactive water loss program. As part of this program, the City will implement the following actions:

- Continue to implement the waterline replacement program.
- Conduct an analysis to revise the replacement schedule of transmission lines.
- Conduct regular inspections of all water main fittings and connections during periods of maintenance and repair.
4.2 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(1)(B), the record management system for the City of Denton records water pumped, water delivered, and water sold. However, the City of Denton's record management system does not allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories as required.

The current billing system separates sales and uses into residential, commercial, and wholesale user classes. At such time that the City of Denton procures a new record management system, such system will have the capabilities required in section 288.2(a)(1)(B).

4.3 Requirement for Water Conservation Plans by Wholesale Customers

Each contract for the wholesale sale of water by the City of Denton will include a requirement that the wholesale customer develop and implement a water conservation plan meeting the requirements of Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(c) of the Texas Administrative Code. If the customer intends to resell the water, then 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 applicable provisions of Chapter 288.
5. OPTIONAL WATER CONSERVATION PLAN CONTENT

TCEQ rules also list optional (not required) conservation strategies, which may be adopted by suppliers to achieve the stated goals of the plan. The following optional strategies are listed in the rules; some are not included in this plan:

- §288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 3.7
- §288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 5.1
- §288.2(a)(3)(C) – Programs for the Replacement or Retrofit of Water-Conserving Plumbing Fixtures in Existing Structures – (Not included in plan)
- §288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 5.2
- §288.2(a)(3)(E) – Pressure Control and/or Reduction – (Not included in plan)
- §288.2(a)(3)(F) – Landscape Water Management Ordinance – Section 5.3
- §288.2(a)(3)(G) – Monitoring Method – Section 5.4
- §288.2(a)(3)(H) – Other Conservation Methods – Section 5.5 and 5.6

5.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures

The State of Texas has required 2.5 gpm faucets, 3.0 gpm showerheads, and 1.6 gpf toilets for new construction since 1992. Similar standards are also required under federal law. Denton’s Plumbing Code complies with the State of Texas requirements. The implementation of the federal rules requiring energy-conserving clothes washers in 2007 improved the water-efficiency of residential clothes washers.

5.2 Reuse and Recycling of Wastewater

The City of Denton’s current reuse program delivers approximately 0.5 MGD of reclaimed wastewater effluent. The current distribution system has a maximum capacity of 4 MGD.
5.3 Landscape Management Ordinance

As part of the development of this water conservation plan, the City of Denton has implemented a lawn and landscape irrigation and water waste ordinance. This ordinance is intended to minimize waste in landscape irrigation and other uses. The ordinance was implemented in 2006, during a drought period when public awareness of the drought was high. The ordinance includes the following elements:

- Prohibition of outdoor watering, except by hand and for watering foundations, from 10:00 a.m. to 6:00 p.m. every day from June 1 through September 30.
- Requirement that all new irrigation systems include rain and freeze sensors.
- Prohibition of designs and installations that spray directly onto impervious surfaces such as sidewalks and roads or onto other non-irrigated areas.
- Prohibition of use of poorly maintained sprinkler systems that waste water.
- Requirement that any outside faucet or service line leak be repaired.
- Enforcement of the ordinance by a system of warnings followed by fines for continued or repeat violations.

5.4 Monitoring Method

Until such time as there is an industry wide method for monitoring per-capita the City of Denton will use the five-year rolling average suggested by the Texas Water Development Board.

5.5 Customer Water Audit

The City of Denton will continue to conduct water audits for single- and multi-family residential customers. The four main purposes are to: educate customers about conservative water use habits and replacement of inefficient toilets, clothes washers, and dishwashers; educate customers about water-efficient showerheads and faucet aerators; identify leaks; and optimize irrigation water usage. The City’s auditor will review the water use habits of the customer, inspect the system for leaks and excessive use, and recommend any equipment repairs or changes to increase the efficiency of both the domestic and irrigation water systems. Although overall water savings from residential water audits are minimal, residential water audits are crucial to maintaining good customer relations particularly related to high billing complaints.

The City of Denton has and will explore new organizational options that would allow for expansion of the water audit program. In addition to increasing availability of personnel for residential water audits, DWU will begin to expand its focus and implement a program for commercial customers. As Denton’s highest
volume water customers are in the commercial sector, commercial water efficiency is expected to make a significant impact toward overall reductions.

5.6 Park, Athletic Field and Golf Course Conservation
The City of Denton will explore the possibility of additional savings by the proper management of park and athletic field irrigation, landscape, and turf practices. The Texas Water Development Board Water Conservation Best Management Practices Guide includes guidelines for water conservation in parks, athletic fields and golf courses. DWU will work with other city departments to determine the potential for water and cost savings by proper management practices and implement them when practical.
6. DROUGHT CONTINGENCY PLAN

6.1 Introduction

The purpose of this drought contingency plan is as follows:

- To conserve the available water supply in times of drought and emergency.
- To maintain supplies for domestic water use, sanitation, and fire protection.
- To protect and preserve public health, welfare, and safety.
- To minimize the adverse impacts of water supply shortages.
- To minimize the adverse impacts of emergency water supply conditions.

6.2 State Requirements for Drought Contingency Plans

This drought contingency plan is consistent with Texas Commission on Environmental Quality (TCEQ) guidelines and requirements for the development of drought contingency plans by public drinking water suppliers, contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code. This rule is included in Appendix B.

TCEQ's minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.20(a)(1)(A) – Provisions to Inform the Public and Provide Opportunity for Public Input – Section 6.3
- 288.20(a)(1)(B) – Provisions for Continuing Public Education and Information – Section 6.4
- 288.20(a)(1)(C) – Coordination with the Regional Water Planning Group – Section 6.9
- 288.20(a)(1)(D) – Criteria for Initiation and Termination of Drought Stages – Section 6.5
- 288.20(a)(1)(E) – Drought and Emergency Response Stages – Section 6.6
- 288.20(a)(1)(F) – Specific, Quantified Targets for Water Use Reductions – Section 6.6
- 288.20(a)(1)(G) – Water Supply and Demand Management Measures for Each Stage – Section 6.6
- 288.20(a)(1)(H) – Procedures for Initiation and Termination of Drought Stages – Section 6.6
- 288.20(a)(1)(I) - Procedures forGranting Variances – Section 6.8
- 288.20(a)(1)(J) - Procedures for Enforcement of Mandatory Restrictions – Section 6.7
- 288.20(a)(3) – Consultation with Wholesale Supplier – Not applicable
- 288.20(b) – Notification of Implementation of Mandatory Measures – Section 6.6
288.20(c) – Review and Update of Plan – Section 6.10TCEQ places additional requirements on wholesale water suppliers in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.22 of the Texas Administrative Code. This Rule is included in Appendix B.

TCEQ's minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.22(a)(1) – Provisions to Inform Wholesale – Section 6.3
- 288.22(a)(7) – Water Supply and Demand Management Measures Conform to Texas Water Code 11.039 – Section 6.6

6.3 Provisions to Inform the Public and Opportunity for Public Input

The City of Denton provided opportunity for public input in the development of this drought contingency plan in [date of Council meeting] by the following means:

- Provided written notice of the proposed plan and the opportunity to comment on the plan by newspaper, posted notice, and notice on City of Denton’s web site, www.cityofdenton.com.
- A public hearing was held at the City of Denton Council Meeting on [date of Council meeting].
- The public may comment on updates to the plan.
- The plan will be available at the City of Denton’s web site www.cityofdenton.com.
- The plan will be provided to anyone requesting a copy.
- The plan will be provided to Upper Trinity Regional Water District in its capacity as a wholesale customer.

The City of Denton shares water rights with the City of Dallas. Denton is the minority water right holder in both water supply reservoirs. Also, Denton is a wholesale customer of the City of Dallas. Due to these factors, it is by design that Denton’s Drought Contingency Plan closely resembles Dallas’ plan. The need to coordinate Denton’s Plan with the Dallas plan is appropriate due to the following reasons:

- The water supply reservoirs (Lake Ray Roberts and Lake Lewisville) are shared by the two cities and Denton is the minority water rights holder in both reservoirs. Denton is an untreated water supply customer of Dallas and will be affected by restrictions that may be initiated by the Dallas plan.
• Consistent communication to customers in a television and media market common to many different water utility entities will provide for a more effective implementation of Drought Contingency Plans.

6.4 Provisions for Continuing Public Education and Information

The City of Denton will inform and educate the public about its drought contingency plan by the following means:

• Making the plan available to the public through the City of Denton web site at www.cityofdenton.com.
• Upon request, make presentations to local organizations, schools, and civic groups on the drought contingency plan (usually in conjunction with presentations on water conservation programs).
• Open public meetings with the Public Utilities Board, Environment Committee, and City Council.

Any time the drought contingency plan is activated or the drought stage changes, the City of Denton will notify local media of the issues, the drought response stage, and the specific actions required of the public. The information will also be publicized on the City of Denton web site, www.cityofdenton.com. Billing inserts will be used as appropriate.

6.5 Initiation and Termination of Drought Response Stages

6.5.1 Initiation of Drought Response Stages

The Director of Water Utilities or designee may order the implementation of a drought response stage or water emergency when one or more of the trigger conditions for that stage is met. The following actions will be taken when a drought stage is initiated:

• The public will be notified through local media.
• Wholesale customers will be notified by telephone with a follow-up letter or fax.
• If any mandatory provisions of the drought contingency plan are activated, the City of Denton will notify the Executive Director of the TCEQ within 5 business days.

The Director of Water Utilities or designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met.
Factors that could influence such a decision include, but are not limited to, the time of the year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs.

**Trigger Condition Types:** The three types of water management conditions are discussed below:

For a **Type A situation**, preservation of the total water supply will be critical and corresponding water management measures should stress overall reductions in water use. This condition is measured by a reduction in lake supply and results from extended drought. The best opportunity to respond to a drought is early in the drought cycle. Drought Contingency measures should stress overall reductions in water demand (i.e., average-day water demand).

For a **Type B situation**, in which the water demand approaches the delivery capacity of the system, the peak water demand will be critical, and corresponding drought contingency measures should stress water-use reductions or shifts to off-peak hours. In this situation, the ultimate goal of Stages 1 and 2 will be to avoid triggering the next stage. A Stage 3 trigger requires immediate and severe water demand reductions. Equipment or system failures that result from increased stresses to the transmission, treatment, or distribution systems can worsen a **Type B situation**. This condition is a result of an increase in demand. In the short term, this typically occurs during the summer months when irrigation requires more water. In the long term, it could occur if treatment plant or distribution system expansions do not keep pace with the growth in consumer demand. Drought contingency measures should stress reductions in peak water demand or redistribution of the demand to off-peak hours.

For a **Type C situation** where deficiencies limit the supply capacity, both water-use reductions and shifts to off-peak hours may be necessary. Although the area involved may be localized, immediate action requiring water demand reduction is necessary. Depending upon the severity of the triggering conditions, it is feasible that the plan could proceed immediately to implementation of stage 3. This condition is a result of a break in a large transmission main, mechanical failure to one or more large pumps, or production plant breakdown. Contamination of water supplies or other unforeseen occurrences may also instigate this condition. They may arise with little warning and require immediate and/or aggressive actions.

Drought contingency measures should stress reductions in peak water demand and/or redistribution of the demand to off-peak hours.
6.5.2 Termination of Drought Response Stages

The Director of Water Utilities or designee may order the termination of a drought response stage or water emergency when the conditions for termination are met or at his/her discretion. The following actions will be taken when a drought stage is terminated:

- The public will be notified through local media.
- Wholesale customers will be notified by telephone with a follow-up letter or fax.
- When any mandatory provisions of the drought contingency plan that have been activated are terminated, the City of Denton will notify the Executive Director of the TCEQ within 5 business days.

The Director of Water Utilities or designee may decide not to order the termination of a drought response stage or water emergency even though the conditions for termination of the stage are met. Factors that could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of conditions that warrant the continuation of the drought stage.
6.6 Drought and Emergency Response Stages

6.6.1 Stage 1, Mild

6.6.1.1 Triggering and Termination Conditions for Stage 1, Mild

6.6.1.1.1 Type A Water Management Condition
Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 65% of the total conservation storage of the lakes

6.6.1.1.2 Type B Water Management Condition
Water demand reaches or exceeds 85% of delivery capacity for 4 consecutive days

6.6.1.1.3 Type C Water Management Condition
- Water demand approaches a reduced delivery capacity for all or part of the system, as determined by DWU
- A major water line breaks, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service
- Natural or man-made contamination of the water supply

Requirements for Termination:
Stage 1 may be terminated when Stage 1 conditions no longer exist and would be unlikely to recur upon termination.

6.6.1.2 Goal For Use Reductions And Actions Available Under Stage 1, Mild
The goal for water use reduction under Stage 1, Mild, is a 5 percent reduction of the use that would have occurred in the absence of drought contingency measures. The Director of Water Utilities or a designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:
All Water Users

(a) Require that all landscape watering be limited to the day-of-week schedule between the hours of 6:00 PM to 10:00AM. Irrigation of landscaped areas with hose-end sprinklers, or automatic irrigation systems should be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8) and for locations without addresses and limited to Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9). Apartments, office building complexes or other property containing multiple addresses may be identified by the lowest address number.

(b) Encourage reduction in frequency of watering new and first year landscaping.

(c) Encourage only initial filling of ornamental fountains.

(d) Encourage reduction in frequency of washing or rinsing of vehicles. Use of bucket/container, hand-held hose with positive shut-off valve or commercial car wash is required.

(e) Encourage the elimination of draining and refilling of swimming pools.

(f) Encourage reduction in frequency of recreational water use including use of faucets, hoses or hydrants.

(g) Foundations may be watered on any day of the week between the hours of 10 PM and 6 AM. Foundations may be watered with a soaker hose or a hand-held hose equipped with a positive shutoff nozzle only.

(h) Recommend that customers do not hose off paved areas, buildings, windows or other surfaces.

City Government

(a) Staff will begin review of the problems initiating Stage 1 actions and will identify possible solutions to address the water shortage.

(b) Initiate public education campaign teaching and encouraging reduced water use practices.

(c) Intensify normal leak detection and repair activities on water pipes and mains.

(d) Restrict water use for the irrigation of parks by 25 percent. Park landscape may be irrigated on any day of the week.

(e) Only flush newly constructed mains and mains that are essential for water quality maintenance.

(f) Encourage 25 percent reduction in frequency of wet street sweeping and city vehicle washing and rinsing.

Commercial Customers

(a) Identify and encourage voluntary reduction measures by high-volume water users through water use audits.
(b) Restrict water use for the irrigation of parks by 25 percent. Park landscape may be irrigated on any day of the week.

(c) Reduce water use for landscape nursery stock by 25 percent.

(d) Require reduction of water use through day-of-week landscape watering schedule for golf courses.

(e) Encourage area restaurants to serve customers water by request only.

(f) Encourage hotel/motels to request multiple day patrons to reuse linens instead of changing every day.

Interruptible Customers

(a) Reduce usage for interruptible customers per contract terms.

Wholesale Customer Cities

(a) Encourage implementation of like procedures by wholesale customers.

Notifications

City of Denton

- Notify major City departments, by telephone and follow-up memo, of Water Awareness Stage #1 and request voluntary water use reduction.
- Stress voluntary elimination of non-essential uses.

External Customers

- Issue press release, radio and video public service announcement to area media describing Water Awareness Stage #1 and the voluntary restrictions that apply.
- Distribute water conservation materials to Denton Independent School District, UNT, TWU and community groups if appropriate.
- Post Water Awareness notices at public buildings including city buildings, county buildings and the federal post office.
- Encourage reduction of water use through the publication of the voluntary landscape watering schedule and request watering only during off-peak hours.

Wholesale Customers

- Advise wholesale customers by telephone and follow-up memo, of Water Awareness Stage #1 and request voluntary water use reduction consistent with actions taken by the City of Denton.
6.6.2 Stage 2, Moderate

6.6.2.1 Triggering Conditions For Stage 2, Moderate

6.6.2.1.1 Type A Water Management Condition
Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 50% of the total conservation storage.

6.6.2.1.2 Type B Water Management Condition
Water demand reaches or exceeds 90% of delivery capacity for 3 consecutive days.

6.6.2.1.3 Type C Water Management Condition
- Water demand equals a reduced delivery capacity for all or part of the system, as determined by DWU.
- A major water line breaks, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service.
- Natural or man-made contamination of the water supply.

Requirements for Termination:
Stage 2 may be terminated when Stage 2 conditions no longer exist and would be unlikely to recur upon termination.

6.6.2.2 Goal For Use Reduction And Actions Available Under Stage 2, Moderate
The goal for water use reduction under Stage 2, Moderate, is a 15 percent reduction of the use that would have occurred in the absence of drought contingency measures. The Director of Water Utilities or a designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:

All Water Users

(a) Require that all landscape watering be limited to the day-of-week schedule between the hours of 6:00 PM to 10:00AM. Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems should be limited to Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8) and for locations without addresses, and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9). Apartments, office building complexes or other property containing multiple addresses may be identified by the lowest address number.

(b) Restrict operation of ornamental fountains or ponds to initial only filling except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
(c) Prohibit recreational water use including use of faucets, hoses or hydrants.

(d) Restrict washing of any motor vehicle, motorbike, boat, trailer, airplane or other vehicle to the use of a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses on the designated watering day. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

(e) Restrict water use to replacing losses during normal use and replacing evaporation in order to maintain proper water quality and proper operation of the pool equipment. Request that use of water to fill, refill, or add to any indoor or outdoor swimming, wading, or jacuzzi pools be limited to the day-of-week schedule.

(f) Prohibit hosing off paved areas, buildings, windows or other surfaces.

(g) Foundations may be watered for a two-hour period only between the hours of 10 PM and 6 AM on the designated watering day with soaker or hand-held hose equipped with a positive shutoff nozzle on the watering schedule.

City Government

(a) Staff will begin review of the problems initiating Stage 2 actions and will identify possible solutions to address the water shortage.

(b) Accelerate public education campaign teaching and encouraging reduced water use practices.

(c) Restrict flushing of new mains not immediately required to provide service.

(d) Continue intensified leak detection and repair activities on water pipes and mains.

(e) Restrict water use for the irrigation of parks by 50 percent. Park landscape may be irrigated on any day of the week.

(f) Increase enforcement efforts.

(g) Reduce frequency of wet street sweeping and city vehicle washing by 50 percent.

(h) Use of water from fire hydrants limited to fire fighting, essential distribution system. All other water use from fire hydrants will be by special permit only.

Commercial Customers

(a) Require day-of-week watering schedule for golf courses.

(b) Reduce water use for landscape nursery stock by 50 percent.
(c) Restrict water use for the irrigation of parks by 50 percent. Park landscape may be irrigated on any day of the week.

**Interruptible Customers**

(a) Reduce usage for interruptible customers per contract terms.

**Wholesale Customers**

(a) Require water demand reductions in accordance with contract obligations for wholesale customers.

(b) Wholesale water systems asked to abide by City of Denton policy for both internal operations and all retail customers. Reduction in rate of flow controller settings by 10% -20% are optional.

**Notifications**

**City of Denton**

- By telephone and attached follow-up memo, notify all major City department water users of Water Watch Stage #2 and the water use restrictions under this stage. Instruct them to implement restrictions on non-essential uses. Use city department contacts in Appendix F.
- Coordinate distribution of water emergency plan details, posters, and handouts to customer service representatives, utility dispatch personnel and Denton public access buildings.

**Retail Customers**

- TCEQ notified of Stage 2 restrictions.
- Issue press release, radio and video public service announcement to area media describing Water Watch Stage #2 and the water use restrictions under this stage. Keep media updated on the water situation. Use media contacts listed in Appendix F.
- By telephone and follow-up letter, notify major area water users of Water Watch Stage #2 and the restrictions that apply. Use plant manager contacts listed in Appendix F.
- Accelerate public education campaign to promote and encourage efficient water use.
- If applicable, notify the U.S. Corp of Engineers by telephone and follow-up letter of the Water Watch Stage #2 conservation measures.

**Wholesale Customers**

Advise wholesale customers by telephone and attached letter of the actions taken by the City of Denton in response to Water Watch Stage #2 and require the implementation of like procedures among their customers. Wholesale customer cities shall either impose water use restrictions equivalent to those imposed on Denton’s
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retail customers OR where applicable, Denton may reduce rate-of-flow controller settings by 10%-20%. Use wholesale customer contacts in Appendix F.

Penalties
- Initiate a 10% rate increase for residential customers for water usage greater than 15,000 gallons per account per 30 days.
- Impose a 10% surcharge penalty for commercial and industrial customers for monthly water use above 80% of prior billing volumes for a 30-day period.
- Initiate code enforcement fines for any violation of the Drought Contingency Plan.

6.6.3 Stage 3, Severe

6.6.3.1 Triggering Conditions For Stage 3, Severe

6.6.3.1.1 Type A Water Management Condition
Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 35% of the total conservation storage

6.6.3.1.2 Type B Water Management Condition
Water demand reaches or exceeds 95% of delivery capacity for 2 consecutive days

6.6.3.1.3 Type C Water Management Condition
- Water demand exceeds a reduced delivery capacity for all or part of the system, as determined by DWU
- A major water line break, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service
- Natural or man-made contamination of the water supply

Requirements for Termination:
Stage 3 may be terminated when Stage 3 conditions no longer exist and would be unlikely to recur upon termination.

6.6.3.2 Goal For Use Reduction And Actions Available Under Stage 3, Severe
The goal for water use reduction under Stage 3, Severe, is a reduction of 20 percent of the use that would have occurred in the absence of drought contingency measures. If the circumstances warrant, the Director of Water Utilities or a designee can set a goal for greater water use reduction. The Director of Water Utilities or a
designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:

All Water Users

(a) Irrigation of landscape is absolutely prohibited unless otherwise indicated within this section.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6 PM to 10 AM.

(c) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi type pools is prohibited. Existing pools may add water to replace losses during normal use and to replace evaporation in order to maintain proper water quality and proper operation of the pool equipment.

(d) Prohibit operation of ornamental fountains or ponds to initial filling except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) Foundations may be watered for a two-hour period only between the hours of 10 PM and 6 AM on the designated watering day from Stage 2 with soaker or hand-held hose equipped with a positive shutoff nozzle on the watering schedule.

(f) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

(g) Permitting of new swimming pools, hot tubs, spas, ornamental ponds and fountain construction is prohibited.

(h) Request a 25% reduction of indoor water uses.

City Government

(a) Wet street sweeping and city vehicle washing or rinsing is prohibited, except when in the immediate interest of public health, safety, and welfare.

(b) Restrict water use for the irrigation of parks by 75 percent. Park landscape may be irrigated on any day of the week.

(c) Restrict use of water from fire hydrants to fire fighting, essential distribution system maintenance and related activities. All other water use from fire hydrants will be by special permit only.
Commercial Customers

(a) Restrict watering of golf course greens and tee boxes restricted to the allowed watering hours and the day-of-week watering schedule from Stage 2; watering of other golf course areas and parks is prohibited unless the golf course utilizes a water source other than that provided by the City of Denton.
(b) Reduce water use for landscape nursery stock by 75 percent.
(c) Restrict water use for the irrigation of parks by 75 percent. Park landscape may be irrigated on any day of the week.

Interruptible Customers

(a) Service to interruptible customers is temporarily suspended.

Wholesale Customers

(a) Same external restrictions apply to wholesale suppliers.

Notifications

City of Denton

• Coordinate dissemination of water conservation plan details, posters, and handouts to customer service representatives, utility dispatch personnel and public access buildings.
• By telephone and attached follow-up memo, notify all major City department users of Water Warning Stage #3 and of the water use restrictions under this stage. Instruct them to eliminate non-essential uses including street and vehicle washing and operation of ornamental fountains, and to implement restrictions on essential uses. Use same contacts as those listed in Appendix F.

Retail Customers

• TCEQ notified of Stage 3 restrictions.
• Issue press release, radio and video public service announcement to area media describing Water Warning Stage #3 and the water use restrictions under this stage. Keep media updated on the water situation. Use same media contacts as those in Appendix F.
• By telephone and follow-up letter, notify major water users of Water Warning #3 and the mandatory water use reduction. Use contacts listed in Appendix F.
• Post Water Warning notices at public buildings including city buildings, county buildings, and the federal post office.
• If applicable, notify U.S. Corps of Engineers by telephone and attached letter of the Water Warning Stage #3 conservation measures.

**Wholesale Customers**

• Advise wholesale customers by telephone and attached letter of actions being taken by the City in response to Water Warning Stage #3 and mandatory implementation of similar procedures among their customers. Wholesale customer cities shall impose water use restrictions equivalent to those imposed on Denton’s retail customers or, where applicable, reduce their rate-of-flow controller settings by a percentage determined by the Director of Water Utilities. Appendix F lists wholesale customers that need to be contacted.

**Penalties**

• Initiate a 20% rate increase for residential customers for water usage greater than 15,000 gallons per account per 30 days.

• Impose a 20% surcharge penalty for commercial and industrial customers for monthly water use above 70% of prior billing volumes for a 30-day period.

• Initiate code enforcement fines for any violation of the Drought Contingency Plan.

**Water Allocation**

**Retail Customers:**

During Stages 2 and 3 of the Drought Contingency Plan, DWU may impose a retail water rate increase to discourage water use. All rates for usage in excess of 15,000 gallons per month (per single-family residential account), or any other usage amount above 15,000 gallons per month, as deemed appropriate by the Director, may be increased by an additional 10 percent or any other percentage deemed appropriate by the Director.

**Wholesale Customers**

In the event that the triggering criteria specified in Section 6 of the Plan for Stage 3 have been met, the Director is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with the latest revision of Texas Water Code Section 11.039. Texas Water Code Section 1.039, Distribution of Water During Shortage, states:
(a) If a shortage of water in a water supply not covered by a water conservation plan prepared in compliance with Texas Commission on Environmental Quality or Texas Water Development Board rules results from drought, accident, or other cause, the water to be distributed shall be divided among all customers pro rata, according to the amount each may be entitled to, so that preference is given to no one and everyone suffers alike.

(b) If a shortage of water in a water supply covered by a water conservation plan prepared in compliance with Texas Commission on Environmental Quality or Texas Water Development Board rules results from drought, accident, or other cause, the person, association of person, or corporation owning or controlling the water shall divide the water to be distributed among all customers pro rata, according to:
   1. the amount of water to which each customer may be entitled; or
   2. the amount of water to which each customer may be entitled, less the amount of water the customer would have saved if the customer had operated its water system in compliance with water conservation plan.

(c) Nothing in Subsection (a) or (b) precludes the person, association of persons or corporation owning or controlling the water from supplying water to a person who has a prior vested right to the water under the laws of this state.

DWU may curtail water deliveries or reduce diversions in accordance with the terms and conditions of its wholesale water supply contracts. If necessary, or if specific contract provisions are not provided for, DWU may curtail water deliveries or reduce diversions in accordance with Texas Water Code Section 11.039. DWU will have authority to restrict flow to its wholesale water customers through the rate-of-flow controllers.

The Director will establish pro rata water allocations, determined as a percentage reduction of the wholesale customer’s water usage, at the time of implementation. The total volume reduction for each wholesale customer will be calculated monthly, based on average water usage for the previous three years. The Director will establish the percentage reduction based on an assessment of the severity of the water shortage condition and the need to curtail water diversions and/or deliveries, and the percentage reduction may be adjusted periodically by the Director. Once pro rata allocation is in effect, water diversions by, or deliveries to, each wholesale customer will be limited to the allocation established for each month.
6.7 Procedures for Enforcement of Mandatory Restrictions

Violations

A person commits an offense if he or she knowingly makes, causes, or permits a use of water contrary to the measures implemented in the Drought Contingency Plan. It is presumed that a person has knowingly made, caused, or permitted use of water contrary to the measures implemented if the mandatory measures have been implemented according to the Plan and any one of the following conditions apply:

- The Drought Contingency Plan prohibits the manner of use.
- The amount of water used exceeds that allowed by the Drought Contingency Plan.
- The manner of use or the amount used violates the terms and conditions of a compliance agreement made following a variance granted by the ACM/Utilities.

Any person in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person’s property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for their minor children and proof that a violation, committed by a child, occurred on the property within control of the parents shall constitute a rebuttable presumption that the parent committed the violation. But, any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.

Any Code Enforcement Officer, Police Officer, or other city employee designated by the Assistant City Manager/Utilities, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in municipal court on the date shown on the citation.

Any person who violates this Plan is guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not less than $250 and not more than $2,000. Each day that one or more provisions in this Plan is violated shall constitute a separate offense. Flow restrictors may be placed in lines after two violations have occurred to limit the amount of water passing through the meter in a 24-hour period. The City of Denton Utilities reserves the right to temporarily cancel water service to the customer until the situation can be resolved. Services
discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at an amount not to exceed $135.00 (or as adjusted by City ordinance), and any other costs incurred by the DWU in discontinuing service. In addition, suitable assurance must be given to the Director that the same action will not be repeated while the Plan is in effect. Compliance with this Plan may also be sought through injunctive relief in the district court.

6.8 Procedures for Granting Variances

Granting a Variance

The ACM/Utilities may grant variances from the Drought Contingency Plan in special cases to persons demonstrating extreme hardship and need. In order to obtain a variance, the applicant must sign a compliance agreement on forms provided by the ACM/Utilities and approved by the City Attorney. The applicant must agree to use the water only in the amount and manner permitted by the variance. A variance must meet the following conditions:

- Granting of a variance must not cause an immediate significant reduction in the City’s water supply.
- The applicant must demonstrate that the extreme hardship or need is related to the health, safety, or welfare of the person requesting it.
- The variance will not adversely affect the health, safety, or welfare of other persons.
- No variance is retroactive nor can it justify any violation of this Drought Contingency Plan before its issuance.
- The variance will remain in effect during the stage in which it was issued and will expire when the Plan is no longer in effect or a new stage is activated.

Revoking a Variance

The ACM/Utilities may revoke a variance granted when the Director of Water Utilities determines any one of the following:

- Conditions causing initial issuance of the variance are no longer applicable.
- Violation of the terms of the compliance agreement.
- The health, safety, or welfare of other persons requires revocation.
Wholesale Customer Variances

The ACM/Utilities may grant variances from the Drought Contingency Plan to wholesale water customers in special cases. Wholesale water customers may request reduced variance allocations for the following conditions:

- The designated period does not accurately reflect a wholesale customer's normal water usage.
- The customer agrees to transfer part of its allocation to another wholesale customer.
- Other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

In order to grant a variance, the applicant must sign a compliance agreement on forms provided by the ACM/Utilities and approved by the City Attorney. No variance shall be retroactive or otherwise justify any violation of this Drought Contingency Plan occurring before the issuance of the variance.

6.9 Coordination with the Regional Water Planning Group

The City of Denton is located within the Region C water planning area. Appendix E includes a copy of a letter sent to the Chair of the Region C Water Planning Group (RCWPG) along with the water conservation and drought contingency plan.

6.10 Review and Update of Drought Contingency Plan

As required by TCEQ rules, the City of Denton will review this drought contingency plan every five years, beginning in 2009. The plan will be updated as appropriate based on new or updated information. As the plan is reviewed and subsequently updated, a copy of the revised Drought Contingency Plan will be submitted to the TCEQ and the RCWPG for their records.

7.0 Severability

The City of Denton Public Utility Board agrees that sections, paragraphs, sentences, clauses, and phrases of this Drought Contingency Plan are severable. If any phrase, clause, sentence, paragraph, or section of this Drought Contingency Plan is declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Drought Contingency Plan, since the same would not have been enacted by the
City of Denton Public Utility Board without the incorporation into this Drought Contingency Plan of any such unconstitutional phrase clause, sentence paragraph, or section.
APPENDIX A

List of References

