

**MODEL WATER  
CONSERVATION  
PLAN FOR NORTH  
TEXAS MUNICIPAL  
WATER DISTRICT  
MEMBER CITIES  
AND CUSTOMERS**

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**MARCH 2008**

THIS DOCUMENT WAS ORIGINALLY SIGNED,  
SEALED AND DATED BY:

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TEXAS NO.: 88504  
ON DATE: MARCH 31, 2008

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**Prepared for:**

**NORTH TEXAS  
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## FORWARD

This model water conservation plan was prepared by Freese and Nichols for the North Texas Municipal Water District (NTMWD). It is intended to be used as a guide by NTMWD Member Cities and Customers as they develop their own water conservation plans. The model plan was prepared pursuant to Texas Commission on Environmental Quality rules. Some material is based on the existing water conservation plans listed in Appendix A. To develop a regional approach, the conservation plans for the City of Fort Worth and the City of Dallas were consulted.

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The model water conservation plan is based on the Texas Administrative Code in effect on August 31, 2007. The Texas Commission on Environmental Quality (TCEQ) is currently preparing additional regulations in compliance with the mandates of Senate Bill 3 and House Bill 4 enacted in 2007 by the 80<sup>th</sup> Texas Legislature. The draft regulations have been considered in the preparation of this plan. The following items are presented in the draft regulations and are not currently in the regulations:

- A definition for “best management practices” will be added.
- A copy of the plan must be submitted to the Executive Administrator of the Texas Water Development Board.
- An annual progress report will be required to be submitted to the Texas Water Development Board. (The annual report may be in a different format than the annual report included in Appendix I).
- Requirement that water suppliers providing service to 3,300 or more connections must prepare a water conservation plan.
- Enforcement authority in relation to violations of the rules regulating water conservation plans and annual report is provided to the Texas Water Development Board.

None of the proposed adjustments will cause this model plan to be obsolete. The most current annual report form should be obtained from TCEQ when preparing the annual report (Appendix I) to submit to the TCEQ. A copy of the annual report should be sent to the Texas Water Development Board as well as to the TCEQ.

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<b>APPENDIX B</b>	<b>Texas Commission on Environmental Quality Rules on Municipal Water Conservation Plans</b> <ul style="list-style-type: none"><li>• Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.1 – Definitions (Page B-1)</li><li>• Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.2 – Water Conservation Plans for Municipal Uses by Public Water Suppliers (Page B-4)</li></ul>
<b>APPENDIX C</b>	<b>TCEQ Water Utility Profile</b>
<b>APPENDIX D</b>	<b>NTMWD Member City and Customer Annual Water Conservation Report</b>
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<b>APPENDIX H</b>	<b>Illegal Water Connections and Theft of Water</b> <ul style="list-style-type: none"><li>• Municipal Ordinance Pertaining to Illegal Water Connections and Theft of Water</li><li>• Municipal Utility District Order Pertaining to Illegal Water Connections and Theft of Water</li><li>• Special Utility District Order Pertaining to Illegal Water Connections and Theft of Water</li><li>• Water Supply Corporation Resolution Pertaining to Illegal Water Connections and Theft of Water</li></ul>
<b>APPENDIX I</b>	<b>TCEQ Water Conservation Implementation Report</b>

## **Model Water Conservation Plan for North Texas Municipal Water District Member Cities and Customers**

MARCH 2008

### **1. INTRODUCTION AND OBJECTIVES**

Water supply has always been a key issue in the development of Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water supplies. At the same time, local and less expensive sources of water supply are largely developed. Additional supplies to meet higher demands will be expensive and difficult to develop. It is therefore important that NTMWD and its Member Cities and Customers make the most efficient use of existing supplies. 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 plans for public water suppliers<sup>1</sup>. TCEQ guidelines and requirements are included in Appendix B. The best management practices established by the Water Conservation Implementation Task Force<sup>2</sup>, established pursuant to SB1094 by the 78<sup>th</sup> Legislature, were also considered in the development of the water conservation measures. The North Texas Municipal Water District (NTMWD) has developed this model water conservation plan for its Member Cities and Customers following TCEQ guidelines and requirements. This model water conservation plan was developed in concert with the NTMWD's water conservation and drought contingency/water emergency response plan<sup>3</sup>. This model water conservation plan replaces the model plan dated August 2004.

This model water conservation plan includes measures that are intended to result in ongoing, long-term water savings. The *Model Drought Contingency and Water Emergency Response Plan for North Texas Municipal Water District Member Cities and Customers* addresses strategies designed to temporarily reduce water use in response to specific conditions.

The objectives of this water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

<sup>1</sup> Superscripted numbers match references listed in Appendix A.

The water conservation plan presented in this document is a model water conservation plan intended for adoption by the NTMWD Member Cities and Customers. In order to adopt this plan, each Member City and Customer will need to do the following:

- Complete the water utility profile (provided in Appendix C).
- Complete the annual water conservation implementation report (in Appendix I).
- Set five-year and ten-year goals for per capita water use.
- Adopt ordinance(s) or regulation(s) approving the model plan.

The water utility profile, goals, and ordinance(s) or regulations should be provided to NTMWD in draft form for review and comments. Final adopted versions should also be provided to NTMWD, as well as TCEQ.

This model plan includes all of the elements required by TCEQ. Some elements of this model plan go beyond TCEQ requirements. Any water supplier wishing to adjust elements of the plan should coordinate with NTMWD.

## **2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES**

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.”<sup>1</sup> The elements in the TCEQ water conservation rules covered in this conservation plan are listed below.

### Minimum Conservation Plan Requirements

The minimum requirements in the Texas Administrative Code for Water Conservation Plans for Public Water Suppliers are covered in this report as follows:

- 288.2(a)(1)(A) – Utility Profile – Section 3 and Appendix C
- 288.2(a)(1)(B) – Specification of Goals – Section 4
- 288.2(a)(1)(C) – Specific, Quantified Goals – Section 4
- 288.2(a)(1)(D) – Accurate Metering – Sections 5.1 and 5.2
- 288.2(a)(1)(E) – Universal Metering – Section 5.2
- 288.2(a)(1)(F) – Determination and Control of Unaccounted Water – Section 5.4
- 288.2(a)(1)(G) – Public Education and Information Program – Section 6
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 7
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 8.1
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 9
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 8.7 and Appendix F
- 288.2(c) – Review and Update of Plan – Section 10

### Conservation Additional Requirements (Population over 5,000)

The Texas Administrative Code includes additional requirements for water conservation plans for drinking water supplies serving a population over 5,000:

- 288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 5.4, 5.5, and 5.6
- 288.2(a)(2)(B) – Record Management System – Section 5.3
- 288.2(a)(2)(C) – Requirement for Water Conservation Plans by Wholesale Customers – Section 8.6

Additional Conservation Strategies

The TCEQ requires that a water conservation implementation report be completed and submitted on an annual basis. This report is included in Appendix I.

In addition to the TCEQ required water conservation strategies, the NTMWD also requires the following strategy to be included in the Member City and Customer plans:

- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 8.4 and Appendix E

TCEQ rules also include optional, but not required, conservation strategies, which may be adopted by suppliers. The NTMWD recommends that the following strategies be included in the Member City and Customer water conservation plans:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 7
- 288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 8.3
- 288.2(a)(3)(C) – Replacement or Retrofit of Water-Conserving Plumbing Fixtures – Section 8.5
- 288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 8.2
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 8.5 and Appendix E
- 288.2(a)(3)(G) – Monitoring Method – Section 5.6
- 288.2(a)(3)(H) – Additional Conservation Ordinance Provisions – Section 8.5

### **3. WATER UTILITY PROFILE**

Appendix C to this model water conservation plan is a sample water utility profile based on the format recommended by the TCEQ. In adopting this model water conservation plan, each Member City and Customer will provide a draft water utility profile to NTMWD for review and comment. A final water utility profile will be provided to NTMWD.

**4. SPECIFICATION OF WATER CONSERVATION GOALS**

TCEQ rules require the adoption of specific water conservation goals for a water conservation plan. As part of plan adoption, each Member City and Customer must develop 5-year and 10-year goals for per capita municipal use. These goals should be submitted to NTMWD in draft form for review. The goals for this water conservation plan include the following:

- Maintain the per capita municipal water use below the specified amount in gallons per capita per day in a dry year, as shown in the completed Table 4.1.
- Maintain the level of unaccounted water in the system below 12 percent annually in 2008 and subsequent years, as discussed in Section 5.4. (The 12 percent goal for unaccounted water is recommended but is not required. Systems with long distances between customers may adopt a higher unaccounted water goal.)
- Implement and maintain a program of universal metering and meter replacement and repair, as discussed in Section 5.2.
- Increase efficient water usage through a water conservation ordinance, order or resolution as discussed in Section 8.4 and Appendix E. (This ordinance is required by the NTMWD.)
- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations, as discussed in Section 8.5. (These landscape water management regulations are recommended but are not required.)
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 6.
- Develop a system specific strategy to conserve water during peak demands, thereby reducing the peak use.

**Table 4.1  
Five-Year and Ten-Year Municipal Per Capita Water Use Goals (gpcd)**

Description	Current Average (gpcd)	5-Year Goal (gpcd)	10-Year Goal (gpcd)
Current 5-Year Average Per Capita Municipal Use with Credit for Reuse			
Expected Reduction due to Low-Flow Plumbing Fixtures			
Projected Reduction Due to Elements in this Plan			
<b>Water Conservation Goals (with credit for reuse)</b>			

## **5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR**

One of the key elements of water conservation is tracking water use and controlling losses through illegal diversions and leaks. It is important to carefully meter water use, detect and repair leaks in the distribution system and provide regular monitoring of unaccounted water.

### **5.1 Accurate Metering of Treated Water Deliveries from NTMWD**

Water deliveries from NTMWD are metered by NTMWD using meters with accuracy of  $\pm 2\%$ . These meters are calibrated on a monthly basis by NTMWD to maintain the required accuracy.

### **5.2 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement**

The provision of water to all customers, including public and governmental users, should be metered. In many cases, Member Cities and Customers already meter retail and wholesale water users. For those Member Cities and Customers who do not currently meter all internal water uses, as well as all subsequent users, these entities should implement a program to meter all water uses within the next three years.

Most Member Cities and Customers test and replace their customer meters on a regular basis. All customer meters should be replaced on a minimum of a 15-year cycle. Those who do not currently have a meter testing and replacement program should implement such a program over the next three years.

### **5.3 Record Management System**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), a record management system should allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information should be included in an annual water conservation report, as described in Section 5.6 below. Those entities whose record management systems do not currently comply with this requirement should move to implement such a system within the next five years.

### **5.4 Determination and Control of Unaccounted Water**

Unaccounted water is the difference between water delivered to Member Cities and Customers from NTMWD (and other supplies, if applicable) and metered water sales to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, uses associated with new construction, etc.) Unaccounted water can include several categories:

- Inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.)
- Accounts which are being used but have not yet been added to the billing system.

- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft. (Included in Appendix G.)
- Other.

Measures to control unaccounted water should be part of the routine operations of Member Cities and Customers. Maintenance crews and personnel should look for and report evidence of leaks in the water distribution system. A leak detection and repair program is described in Section 5.5 below. Meter readers should watch for and report signs of illegal connections, so they can be quickly addressed. .

Unaccounted water should be calculated in accordance with the provisions of Appendix C. With the measures described in this plan, Member Cities and Customers should maintain unaccounted water below 12 percent in 2008 and subsequent years. If unaccounted water exceeds this goal, the Member City or Customer should implement a more intensive audit to determine the source(s) of and reduce the unaccounted water. The annual conservation report described below is the primary tool that should be used to monitor unaccounted water.

### **5.5 Leak Detection and Repair**

As described above, city crews and personnel should look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur should be targeted for replacement as funds are available.

### **5.6 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report**

Appendix D is a form that should be used in the development of an annual water conservation report by Member Cities and Customers. This form should be completed by March 31 of the following year and used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The form records the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values. The annual water conservation report should be sent to NTMWD, which will monitor NTMWD Member Cities' and Customers' water conservation trends.

### **5.7 Water Conservation Implementation Report**

Appendix I includes the TCEQ-required water conservation implementation report. The report is due to the TCEQ by May 1 of every year, starting in the year 2010. This report lists the various water conservation strategies that have been implemented, including the date the strategy was implemented. The report also calls for the five-year and ten-year per capita water use goals from the previous water conservation plan. The reporting entity must answer whether or not these goals have been met and if not, why not. The amount of water saved is also requested.

## 6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN

The continuing public education and information campaign on water conservation includes the following elements:

- Utilize the “Water IQ: Know Your Water” and other public education materials produced by the NTMWD.
- Insert water conservation information with water bills. Inserts will include material developed by Member Cities’ and Customers’ staff and material obtained from the TWDB, the TCEQ, and other sources.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Notify local organizations, schools, and civic groups that Member City or Customer staff and staff of the NTMWD are available to make presentations on the importance of water conservation and ways to save water.
- Promote the *Texas Smartscape* web site ([www.txsmartscape.com](http://www.txsmartscape.com)) and provide water conservation brochures and other water conservation materials available to the public at City Hall and other public places.
- Make information on water conservation available on its website (if applicable) and include links to the “Water IQ: Know Your Water” website, *Texas Smartscape* website and to information on water conservation on the TWDB and TCEQ web sites and other resources.

## 7. WATER RATE STRUCTURE

Member Cities and Customers should adopt, if they have not already done so, an increasing block rate water structure that is intended to encourage water conservation and discourage excessive use and waste of water upon completion of the next rate study or within five years. An example water rate structure is as follows:

### Residential Rates

1. Monthly minimum charge. This can (but does not have to) include up to 2,000 gallons water use with no additional charge.
2. Base charge per 1,000 gallons up to the approximate average residential use.
3. 2<sup>nd</sup> tier (from the average to 2 times the approximate average) at 1.25 to 2.0 times the base charge.
4. 3<sup>rd</sup> tier (above 2 times the approximate average) at 1.25 to 2.0 times the 2<sup>nd</sup> tier.
5. The residential rate can also include a lower tier for basic household use up to 4,000 gallons per month or a determined basic use.

### Commercial/Industrial Rates

Commercial/industrial rates should include at least 2 tiers, with rates for the 2<sup>nd</sup> tier at 1.25 to 2.0 times the first tier. Higher water rates for commercial irrigation use are encouraged, but not required.

## **8. OTHER WATER CONSERVATION MEASURES**

### **8.1 NTMWD System Operation Plan**

Member Cities and Customers of NTMWD purchase treated water from NTMWD and do not have surface water supplies for which to implement a system operation plan. NTMWD's permits do allow some coordinated operation of its water supply sources, and NTMWD is seeking additional water rights for coordinated operation to optimize its available water supplies.

### **8.2 Reuse and Recycling of Wastewater**

Most Member Cities and Customers do not own and operate their own wastewater treatment plants. Their wastewater is treated by NTMWD. NTMWD currently has the largest wastewater reuse program in the state. NTMWD has water rights allowing reuse of up to 71,882 acre-feet per year of this treated wastewater through Lake Lavon for municipal purposes. In addition, NTMWD has also developed the East Fork Raw Water Supply Project which can divert up to 157,393 acre-feet per year based on treated wastewater discharges by the NTMWD. When fully developed, these two reuse projects will provide up to 44 percent of the NTMWD's currently permitted water supplies. NTMWD also provides treated effluent from its wastewater treatment plants available for direct reuse for landscape irrigation and industrial use.

Those Member Cities and Customers who own and operate their own wastewater treatment plants should move toward reusing treated effluent for irrigation purposes at their plant site over the next three years. These entities should also seek other alternatives for reuse of recycled wastewater effluent.

### **8.3 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

The state has required water-conserving fixtures in new construction and renovations since 1992. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 3.0 gpm for showerheads, and 1.6 gallons per flush for toilets. Similar standards are now required nationally under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures. Optional rebate programs to encourage replacement of older fixtures with water conservation programs are discussed in Section 8.5.

### **8.4 Landscape Water Management Measures**

The following landscape water management measures are required by the NTMWD for this plan. These are the minimal measures that should be implemented and enforced in order to irrigate the landscape appropriately.

- Time of day restrictions prohibiting lawn irrigation watering from 10 AM to 6 PM beginning April 1 and ending October 31 of each year.

- Prohibition of watering of impervious surfaces. (Wind driven water drift will be taken into consideration.)
- Prohibition of outdoor watering during precipitation or freeze events.
- Lawn and landscape irrigation limited to twice per week.
- Prohibiting the use of treated water to fill or refill residential, amenity, and any other natural or manmade ponds. A pond is considered to be a still body of water with a surface area of 500 square feet or more.
- Rain and freeze sensors and/or ET or Smart controllers required on all new irrigation systems. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.
- “At home” car washing can be done only when using a water hose with a shut-off nozzle.
- Member Cities and Customers are responsible for developing regulations, ordinances, policies, or procedures for enforcement of water conservation guidelines.
- Prohibition of watering areas that have been overseeded with cool season grasses (such as rye grass or other similar grasses), except for golf courses and public athletic fields.

### **8.5 Additional Water Conservation Measures (Not Required)**

The following water conservation measures are also included in this Plan as options to be considered by Member Cities and Customers:

- Additional landscape water management regulations
- Landscape ordinance
- Water audits
- Rebates

Appendix E is a summary of considerations for landscape water management regulations adopted as part of the development of this water conservation plan. These regulations are intended to minimize waste in landscape irrigation. Appendix E includes the required landscape water measures in 8.4. In addition, NTMWD recommends the following measures, but they are not required:

- Requirement that all existing irrigation systems be retrofitted with rain and freeze sensors and/or ET or Smart controllers capable of multiple programming. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.
- Prohibition of use of poorly maintained irrigation systems that waste water.
- Prohibition of planting cool season grasses (such as rye grass or other similar grasses) that intensify cool season water requirements, exception allowed for golf courses or public athletic fields.

- Requirement that all new athletic fields be irrigated by a separate irrigation system from surrounding areas.
- Implementation of other measures to encourage off-peak water use.

Landscape ordinances are developed by cities to guide developers in landscaping requirements for the city. NTMWD recommends that the following measures be included in the entity's landscape ordinance:

- Requirement that all new irrigation systems be in compliance with state design and installation regulations (TAC Title 30, Part 1, Chapter 344).
- Native, drought tolerant, or adaptive plants should be encouraged.
- Drip irrigation systems should be promoted.
- Evapotranspiration (ET) / Smart controllers that only allow sprinkler systems to irrigate when necessary should be promoted.

Water audits are useful in finding ways in which water can be used more efficiently at a specific location. NTMWD recommends that Member Cities and Customers offer water audits to customers.

In addition to the conservation measures described above, the NTMWD considers the following water conservation incentive programs as options that might be included in the plan:

- Low-flow toilet replacement and rebate programs,
- Rebates for rain/freeze sensors and/or ET or Smart controllers,
- Low-flow showerhead and sink aerators replacement programs or rebates,
- ET/Smart irrigation controller rebates,
- Water efficient clothes washer rebates,
- Pressure reducing valve installation programs or rebates,
- Rain barrel rebates,
- On-demand hot water heater rebates, or
- Other water conservation incentive programs.

## **8.6 Requirement for Water Conservation Plans by Wholesale Customers**

Every contract for the wholesale sale of water by Member Cities and/or Customers that is entered into, renewed, or extended after the adoption of this water conservation plan will include a requirement that the wholesale customer and any wholesale customers of that wholesale customer develop and implement a water conservation plan meeting the requirements of Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code. The requirement will also extend to each successive wholesale customer in the resale of the water.

## **8.7 Coordination with Regional Water Planning Group and NTMWD**

Appendix F includes a letter sent to the Chair of the Region C water planning group with this model water conservation plan. Each Member City and Customer will send a copy of their draft ordinance(s) or regulation(s) implementing the plan and their water utility profile to NTMWD for review and comment. The adopted ordinance(s) or regulation(s) and the adopted water utility profile will be sent to the Chair of the Region C Water Planning Group and to NTMWD.

**9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN**

Appendix G contains a copy of an ordinance, order, or resolution which may be tailored to meet Member or Customer City needs and be adopted by the City Council or governing board regarding the model water conservation plan. The ordinance, order, or resolution designates responsible officials to implement and enforce the water conservation plan. Appendix E, the considerations for landscape water management regulations, also includes information about enforcement. Appendix H includes a copy of an ordinance, order, or resolution that may be adopted related to illegal connections and water theft.

**10. REVIEW AND UPDATE OF WATER CONSERVATION PLAN**

TCEQ requires that the water conservation plans be updated prior to May 1, 2009. The plans are required to be updated every five years thereafter. The plan will be updated as required and as appropriate based on new or updated information.

**APPENDIX A**  
**LIST OF REFERENCES**

## Appendix A List of References

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.2, downloaded from [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=4&ti=30&pt=1&ch=288](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288), July 2007.
- (2) Water Conservation Implementation Task Force: “Texas Water Development Board Report 362, Water Conservation Best Management Practices Guide,” prepared for the Texas Water Development Board, Austin, November 2004.
- (3) Freese and Nichols, Inc.: *North Texas Municipal Water District Water Conservation and Drought Contingency/Water Emergency Response Plan*, prepared for the North Texas Municipal Water District, Fort Worth, March 2008.

The following conservation and drought contingency plans and related documents were reviewed in the development of this plan. References marked with a \* were used heavily in the development of this plan.

- (4) Edward Motley, Marisa Vergara, Tom Gooch, and Stephanie Griffin: Memorandum to File on “Region C Municipal Water Use Projections Adopted on August 18, 2003,” Fort Worth, August 21, 2003.
- (5) City of Austin Water Conservation Division: “City of Austin Water Drought Contingency Plan, Developed to Meet Senate Bill 1 Regulatory Requirements,” Austin, August 1999.
- (6) City of Austin Water Conservation Division: “City of Austin Water Conservation Plan, Developed to Meet Senate Bill 1 Regulatory Requirements,” Austin, August 1999.
- (7) Upper Trinity Regional Water District: “Water Conservation Plan and Emergency Water Demand Management Plan,” adopted by the Board of Directors, Lewisville, August 5, 1999.
- (8) Upper Trinity Regional Water District: “Water Conservation Plan and Emergency Water Demand Management Plan (2002 Amended),” adopted by the Board of Directors, Lewisville, February 2002.
- (9) \*City of Dallas Water Utilities Department: “City of Dallas Water Management Plan,” adopted by the City Council, Dallas, September 1999.
- (10) Updates to City of Dallas Water Management Plan found at <http://www.dallascityhall.com> in September 2003.
- (11) \*City of Dallas Water Utilities Department: “City of Dallas Water Conservation Plan,” adopted by the City Council, Dallas, September 1999.
- (12) \*City of Fort Worth: “Water Conservation plan for the City of Fort Worth,” Fort Worth, August 1999.

- (13) Updates to the City of Fort Worth water conservation plan found at <http://ci.fort-worth.tx.us> in September 2003.
- (14) \*City of Fort Worth: "Emergency Water Management Plan for the City of Fort Worth," Fort Worth, August 19, 2003.
- (15) HDR Engineering, Inc.: "Water Conservation and Emergency Demand Management Plan," prepared for the Tarrant Regional Water District, Austin, February 2000.
- (16) Freese and Nichols, Inc.: "Water Conservation and Drought Contingency Plan," prepared for Brown County Water Improvement District No. 1, Fort Worth, August 1999.
- (17) Freese and Nichols, Inc.: "Water Conservation and Drought Contingency Plan," prepared for the Sabine River Authority of Texas, Fort Worth, September 1994.
- (18) HDR Engineering, Inc.: "Water Conservation and Emergency Demand Management Plan," prepared for the Tarrant Regional Water District, Austin, June 1998.
- (19) HDR Engineering, Inc.: "Water Conservation Plan for the City of Corpus Christi," adopted by the City of Corpus Christi City Council, August 24, 1999.
- (20) City of Houston's water conservation plan downloaded September 2003 from <http://www.cityofhouston.gov>
- (21) City of Houston: "Ordinance N. 2001-753, Amending Chapter 47 of the Code of Ordinances Relating to Water Emergencies," Houston, August 2001.
- (22) City of Houston: "Ordinance No. 98-764, Relating to Water Conservation," Houston, September 1998.
- (23) City of Houston: "Water Conservation Plan," 1998.
- (24) City of Houston: "Water Emergency Response Plan," Houston, July 15, 1998.
- (25) City of Lubbock: "Water Conservation Plan," ordinance number 10177 adopted by the City Council in August 1999.
- (26) City of El Paso Water Conservation Ordinance downloaded August 14, 2003 from <http://www.epwu.org/ordinance.html>
- (27) San Antonio Water System: "Water Conservation and Reuse Plan," San Antonio, November 1998 with June 2002 updates.
- (28) North Texas Municipal Water District: "District Policy No. 24 Water Conservation Plan Containing Drought Contingency Plan," adopted August 1999.
- (29) GDS Associates, Inc.: "Water Conservation Study," prepared for the Texas Water Development Board, Fort Worth, 2002.
- (30) A & N Technical Services, Inc.: "BMP Costs & Savings Study: A Guide to Data and Methods for Cost-Effectiveness Analysis of Urban Water Conservation Best Management Practices," prepared for The California Urban Water Conservation Council, Santa Monica, California, July 2000.

(31) \*City of Dallas: “City of Dallas Ordinances, Chapter 49, Section 21.1,” Dallas, October 1, 2001.

**APPENDIX B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES  
ON MUNICIPAL WATER CONSERVATION PLANS**

**APPENDIX B**  
**Texas Commission on Environmental Quality Rules**  
**on Municipal Water Conservation Plans**

**Texas Administrative Code**

<b><u>TITLE 30</u></b>	ENVIRONMENTAL QUALITY
<b><u>PART 1</u></b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b><u>CHAPTER 288</u></b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b><u>SUBCHAPTER A</u></b>	WATER CONSERVATION PLANS
<b>RULE §288.1</b>	<b>Definitions</b>

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The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

- (1) Agricultural or Agriculture--Any of the following activities:
  - (A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;
  - (B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
  - (C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
  - (D) raising or keeping equine animals;
  - (E) wildlife management; and
  - (F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.
- (2) Agricultural use--Any use or activity involving agriculture, including irrigation.
- (3) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.
- (4) Drought contingency plan--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).
- (5) Industrial use--The use of water in processes designed to convert materials of a lower

order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

- (6) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.
- (7) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.
- (8) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field repressuring.
- (9) Municipal per capita water use--The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.
- (10) Municipal use--The use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling streets, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution system without special construction to meet its demands, and for the watering of lawns and family gardens.
- (11) Municipal use in gallons per capita per day--The total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculating gallons per capita per day for targets and goals.
- (12) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.
- (13) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the

public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

- (14) Public water supplier--An individual or entity that supplies water to the public for human consumption.
- (15) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.
- (16) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.
- (17) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.
- (18) Water conservation plan--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).
- (19) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

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**Source Note:** The provisions of this §288.1 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective August 15, 2002, 27 TexReg 7146, amended to be effective October 7, 2004, 29 TexReg 9384.

**Texas Administrative Code**

<b><u>TITLE 30</u></b>	ENVIRONMENTAL QUALITY
<b><u>PART 1</u></b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b><u>CHAPTER 288</u></b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b><u>SUBCHAPTER A</u></b>	WATER CONSERVATION PLANS
<b>RULE §288.2</b>	<b>Water Conservation Plans for Municipal Uses by Public Water Suppliers</b>

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- (a) A water conservation plan for municipal water use by public water suppliers shall provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.
- (1) Minimum requirements. All water conservation plans for municipal uses by public drinking water suppliers must include the following elements:
- (A) a utility profile including, but not limited to, information regarding population and customer data, water use data, water supply system data, and wastewater system data;
  - (B) until May 1, 2005, specification of conservation goals including, but not limited to, municipal per capita water use goals, the basis for the development of such goals, and a time frame for achieving the specified goals;
  - (C) beginning May 1, 2005, 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. The goals established by a public water supplier under this subparagraph are not enforceable;
  - (D) 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;
  - (E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;
  - (F) measures to determine and control unaccounted-for uses of water (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);
  - (G) a program of continuing public education and information regarding water conservation;
  - (H) 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;
  - (I) 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; and
- (J) a means of implementation and enforcement which shall be evidenced by:
    - (i) a copy of the ordinance, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and
    - (ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and
  - (K) 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.
- (2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:
- (A) a 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) a record management system to record water pumped, water deliveries, water sales, and water losses which allows for the desegregation of water sales and uses into the following user classes:
    - (i) residential;
    - (ii) commercial;
    - (iii) public and institutional; and
    - (iv) industrial;
  - (C) 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, 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 the provisions of this chapter.
- (3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the

water conservation plan:

- (A) 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;
  - (B) 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;
  - (C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
  - (D) reuse and/or recycling of wastewater and/or graywater;
  - (E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;
  - (F) a program and/or ordinance(s) for landscape water management;
  - (G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and
  - (H) 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.
- (b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.
- (c) Beginning May 1, 2005, 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.

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**Source Note:** The provisions of this §288.2 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384.

**APPENDIX C**  
**TCEQ WATER UTILITY PROFILE**

**APPENDIX C**  
**TCEQ Water Utility Profile**  
 (Based on November 5, 2004 TCEQ Profile)

The purpose of the Water Utility Profile is to assist an applicant with water conservation plan development and to ensure that important information and data be considered when preparing your water conservation plan and goals. You may contact the Municipal Water Conservation Unit of the TWDB at 512-936-2391 for assistance, or the Resource Protection Team at 512-239-4691 if submitted to the TCEQ. You may also contact Denise Hickey of NTMWD at 972/442-5405 or Tom Gooch of Freese and Nichols at 817/735-7300.

Name of Entity: \_\_\_\_\_  
 Address & Zip: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_  
 Fax Number: \_\_\_\_\_  
 Form Completed by: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

Name and phone number of person/department responsible for implementing a water conservation program:  
 Name: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

**I. POPULATION AND CUSTOMER DATA**

**A. Population and Service Area Data**

1. Please attach a copy of your service-area map and, if applicable, a copy of your Certificate of and a service-area map.
2. Service area size (square miles): \_\_\_\_\_
3. Current population of service area: \_\_\_\_\_ as of year \_\_\_\_\_
4. Current population served by utility:  
 water: \_\_\_\_\_  
 wastewater: \_\_\_\_\_
5. Population served by water utility for the previous five years. (Please list by year in ascending order.):

Year	Population

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

Year	Population
2010	
2020	
2030	
2040	
2050	
2060	

7. List source/method for the calculation of current and projected population:

**B. Active Connections**

1. Current number of active connections.

Check whether multi-family service is counted as Residential \_\_\_ or Commercial \_\_\_.

Current year is: \_\_\_\_\_

Treated Water Users	Metered	Non-Metered	Total
Residential			
Commercial			
Industrial			
Other			
Total			

2. List the net number of new connections per year for most recent three years:

Year			
Residential			
Commercial			
Industrial			
Other			
Total			

**C. High Volume Customers**

List annual water use for the five highest volume customers.

(Please indicate if treated or raw water delivery.):

Customer	Use (1,000 gal/yr)	Treated or Raw Water?

**II. WATER USE DATA FOR SERVICE AREA**

**A. Water Accounting Data**

1. Amount of water use for previous five years (in 1,000 gal):

Please indicate:                      Diverted Water     \_\_\_  
    Treated Water     \_\_\_

<b>Year</b>					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					

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

2. Amount of water (in 1,000 gallons) delivered (sold) as recorded by the following account types

<b>Year</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Wholesale</b>	<b>Other</b>	<b>Total Sold</b>

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

Data is calculated in Appendix D on tab "D-4". TWDB requires that the data for this entry be reported in g

<b>Year</b>	<b>Amount (gal.)</b>	<b>%</b>

4. Municipal water use for previous five years:

Year	Population	Total Diverted (or Treated) (1,000 gal)

**B. Projected Water Demands**

If applicable, attach projected water supply demands 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 any additional water supply requirement from such growth.

Year	Projected Demand (Ac-Ft)	Source of data	Additional Water Supply Requirements

**III. WATER SUPPLY SYSTEM DATA**

**A. Water Supply Sources**

List all current water supply sources and the amounts authorized with each:

Type	Source	Amount Available (AF/Y)
Surface Water		
Groundwater		
Contracts	North Texas Municipal Water District (SW)	
Other		

**B. Treatment and Distribution System**

- 1. Design daily capacity of system: \_\_\_\_\_ MGD
  
- 2. Storage capacity:
  - Elevated \_\_\_\_\_ MG
  - Ground \_\_\_\_\_ MG
  
- 3. If surface water, do you recycle filter backwash to the head of the plant?  
Yes \_\_\_ No \_\_\_. If yes, approximately \_\_\_ MGD.
  
- 4. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks. If possible, include a sketch of the system layout.

**IV. WASTEWATER SYSTEM DATA**

**A. Wastewater System Data**

- 1. Design capacity of wastewater treatment plant(s): \_\_\_\_\_ MGD
  
- 2. Is treated effluent used for irrigation on-site \_\_\_\_, off-site \_\_\_\_, plant washdown \_\_\_\_, or chlorination/dechlorination \_\_\_\_? If yes, approximately \_\_\_\_ gallons per month.
  
- 3. Briefly describe the wastewater system(s) of the area serviced by the water utility. Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream. Please provide a sketch or map which located the plant(s) and di

Treatment Plant Name	TCEQ Number	Operator	Owner	Receiving Stream

**B. Wastewater Data for Service Area**

- 1. Percent of water service area served by wastewater system: \_\_\_\_\_ %
- 2. Monthly wastewater volume for previous three years (in 1,000 gallons):

<b>Year</b>			
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			
Total			

## Appendix C1

### Definitions of Commonly Used Terms

**Conservation** - Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

**Industrial use** - The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

**Irrigation** - The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.

**Municipal per capita water use** - The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

**Municipal use** - The use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling streets, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution system without special construction to meet its demands, and for the watering of lawns and family gardens.

**Municipal use in gallons per capita per day** - The total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculating gallons per capita per day for targets and goals.

**Pollution** - The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

**Public water supplier** - An individual or entity that supplies water to the public for human consumption.

**Regional water planning group** - A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, ' 16.053.

**Retail public water supplier** - An individual or entity that for compensation supplies water to the

public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

**Reuse** - The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Water conservation plan** - 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).

**Water loss** - The difference between water diverted or treated and water delivered (sold). Water loss can result from:

1. inaccurate or incomplete record keeping;
2. meter error;
3. unmetered uses such as firefighting, line flushing, and water for public buildings and water treatment plants;
4. leaks; and
5. water theft and unauthorized use.

**Wholesale public water supplier** - An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

**If you have any questions on how to fill out this form or about the \_\_\_\_\_ program, please contact us at 512/239-\_\_\_\_\_.**

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.

**APPENDIX D**

**NTMWD MEMBER CITY AND CUSTOMER ANNUAL WATER  
CONSERVATION REPORT**

**APPENDIX D**  
**NTMWD MEMBER CITY AND CUSTOMER ANNUAL WATER CONSERVATION REPORT**  
**Due: March 31 of every year**

**Entity Reporting:** \_\_\_\_\_  
**Filled Out By:** \_\_\_\_\_  
**Date Completed:** \_\_\_\_\_  
**Year Covered:** \_\_\_\_\_  
**# of Connections** \_\_\_\_\_

**Recorded Deliveries and Sales by Month (in Million Gallons):**

Month	Deliveries from NTMWD	Other Supplies	Sales by Category						
			Residential	Commercial	Public/ Institutional	Industrial	Wholesale	Other	Total
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									
<b>TOTAL</b>									

**Unaccounted Water (Million Gallons):**

NTMWD Deliveries	from Table above
Other Supplies	from Table above
Total Supplies	from Table above
Total Sales	from Table above
Estimated Fire Use	estimated from best available data
Estimated Line Flushing Use	estimated from best available data
Unaccounted Water	
% Unaccounted	
Goal for % Unaccounted	12.00%

**Per Capita Municipal Use (Gallons per person per day)**

Municipal Use (MG) from Table above (NTMWD deliveries+ other supplies - industrial sales - municipal sales - other sales)

Estimated Population please describe source of population estimate

Per Capita Use (gpcd)

5-year Per Capita Goal (\_\_\_)

10-year Per Capita Goal (\_\_\_)

**Recorded Wholesale Sales by Month (in Million Gallons):**

Month	Sales to	Sales to	Sales to	Sales to	Sales to	Sales to	Sales to	Total Wholesale Sales
January								
February								
March								
April								
May								
June								
July								
August								
September								
October								
November								
December								
<b>TOTAL</b>								

**Information on Wholesale Customers:**

<b>Customer</b>	<b>Estimated Population</b>
-----------------	-----------------------------

**Unusual Circumstances (use additional sheets if necessary):**

--

**Progress in Implementation of Conservation Plan (use additional sheets if necessary):**

--

**Conservation measures planned for next year (use additional sheets if necessary):**

--

**Assistance requested from North Texas Municipal Water District (use additional sheets if necessary):**

--

**Other (use additional sheets if necessary):**

--

**Historical Water Use Data for \_\_\_\_\_**

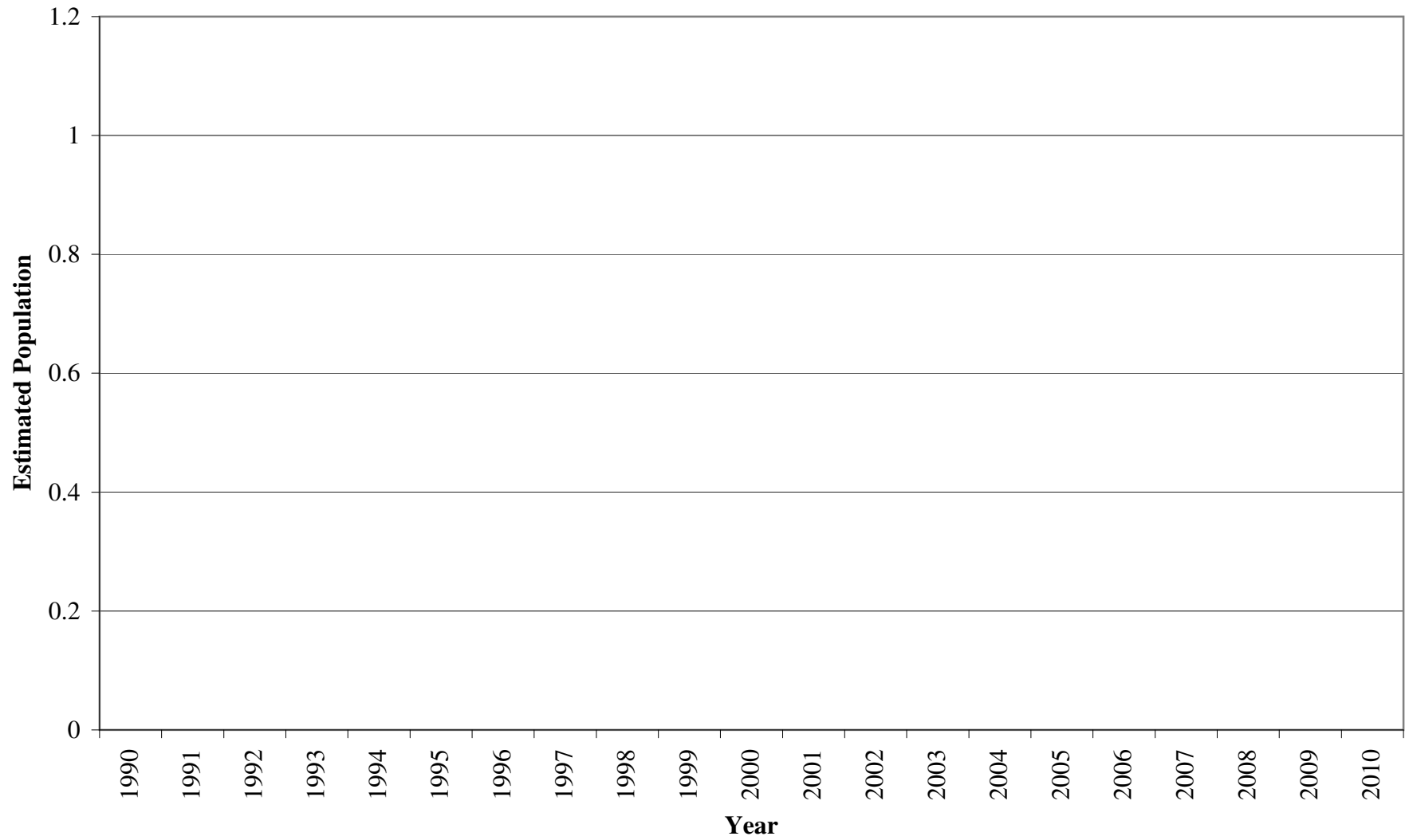
Year	Connections	Estimated Population	Deliveries from NTMWD (MG)	Other Supplies (MG)	Metered Sales by Category (Million Gallons)						
					Residential	Commercial	Public/ Institutional	Industrial	Wholesale	Other	Total
1990											
1991											
1992											
1993											
1994											
1995											
1996											
1997											
1998											
1999											
2000											
2001											
2002											
2003											
2004											
2005											
2006											
2007											
2008											
2009											
2010											

**Historical Per Capita Use Data and Unaccounted Water for \_\_\_\_\_**

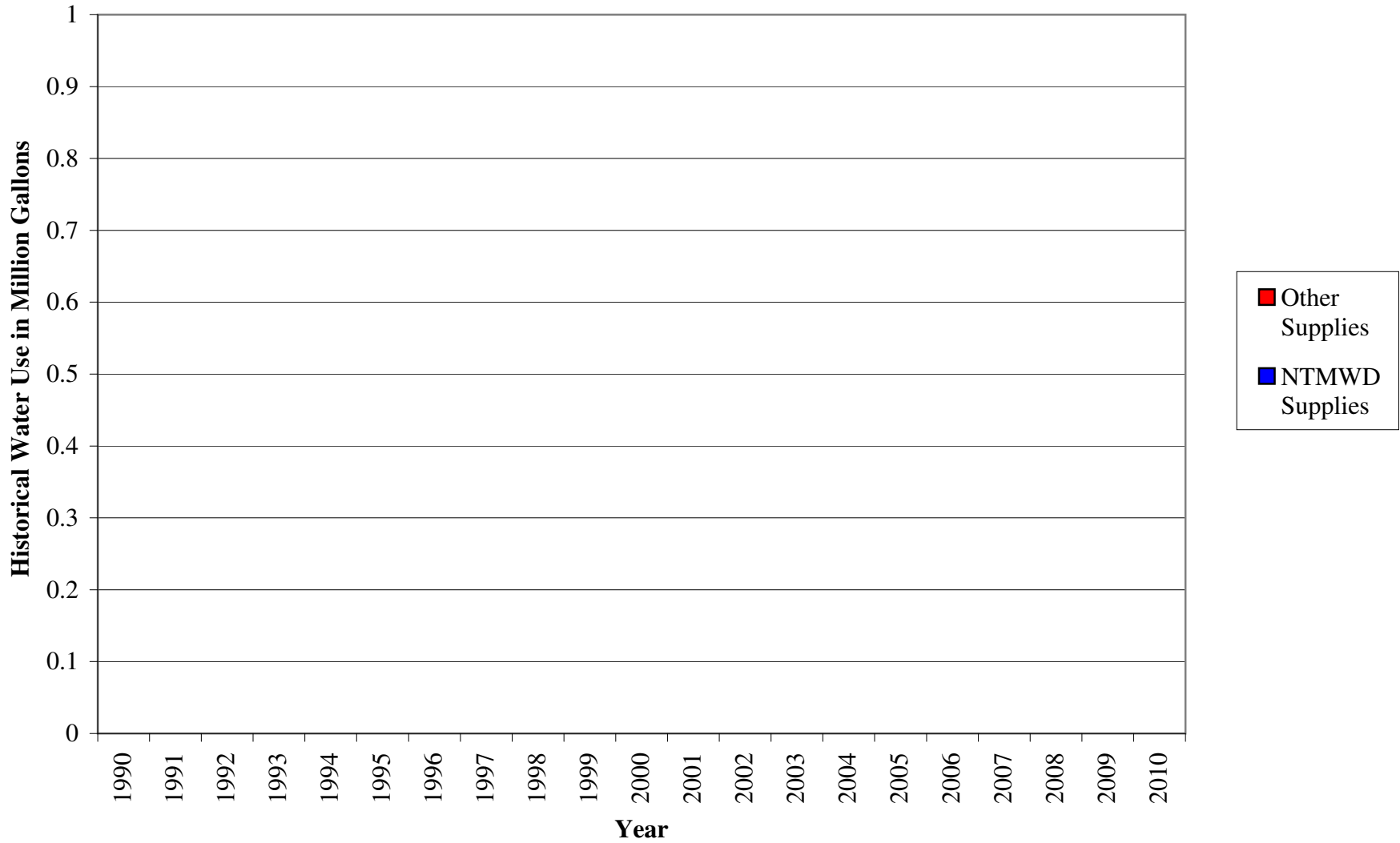
<b>Year</b>	<b>Estimated Population</b>	<b>In-City Municipal Use (MG)</b>	<b>Per Capita Municipal Use (gpcd)</b>	<b>Deliveries from NTMWD (MG)</b>	<b>Other Supplies (MG)</b>	<b>Total Metered Sales (MG)</b>	<b>Estimated Fire Use (MG)</b>	<b>Estimated Line Flushing (MG)</b>	<b>Unaccounted Water (MG)</b>	<b>% Unaccounted</b>
1990										
1991										
1992										
1993										
1994										
1995										
1996										
1997										
1998										
1999										
2000										
2001										
2002										
2003										
2004										
2005										
2006										
2007										
2008										
2009										
2010										

Note: In-city municipal use = total water supplied less sales to industry, wholesale sales and other sales.

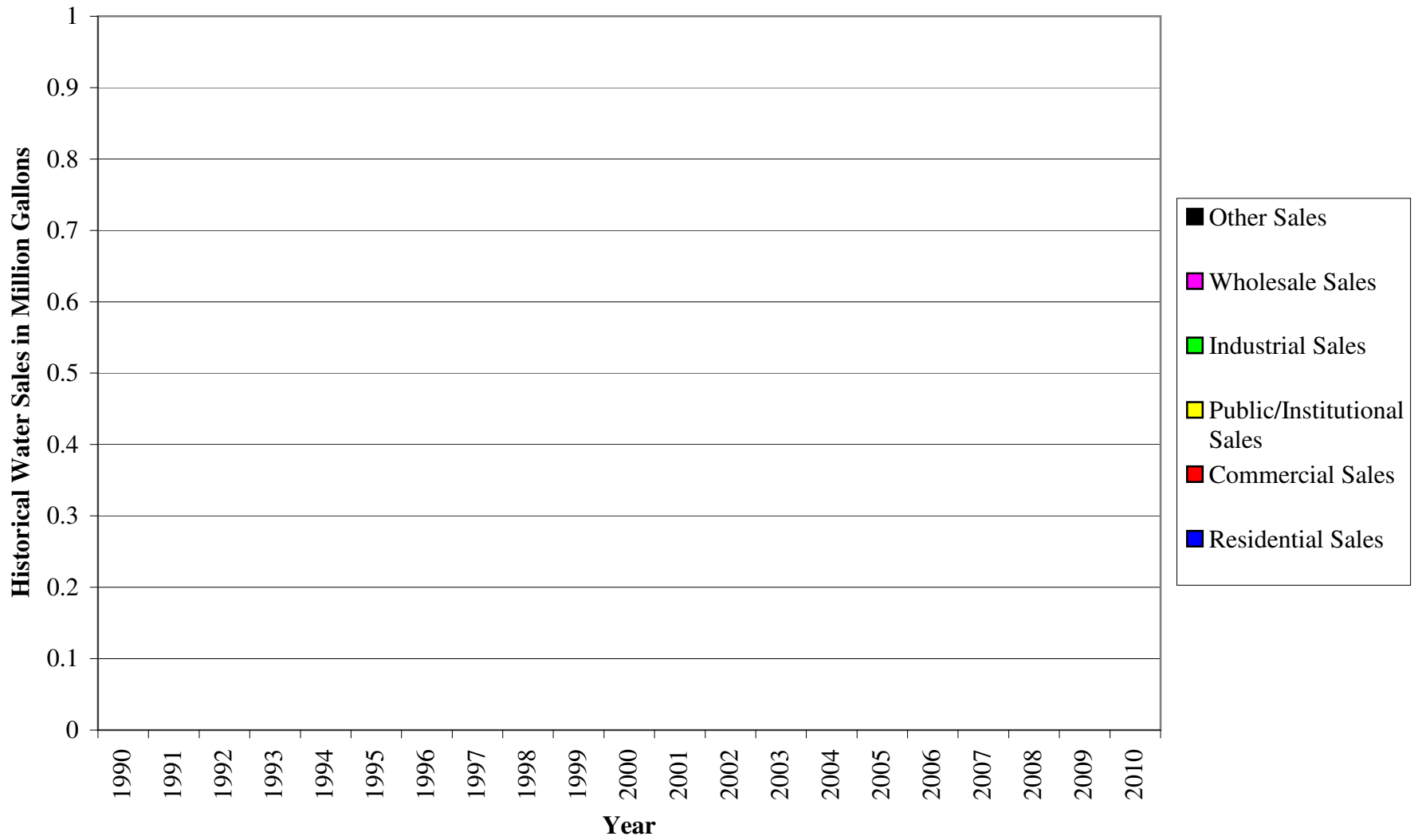
## Estimated Historical Population



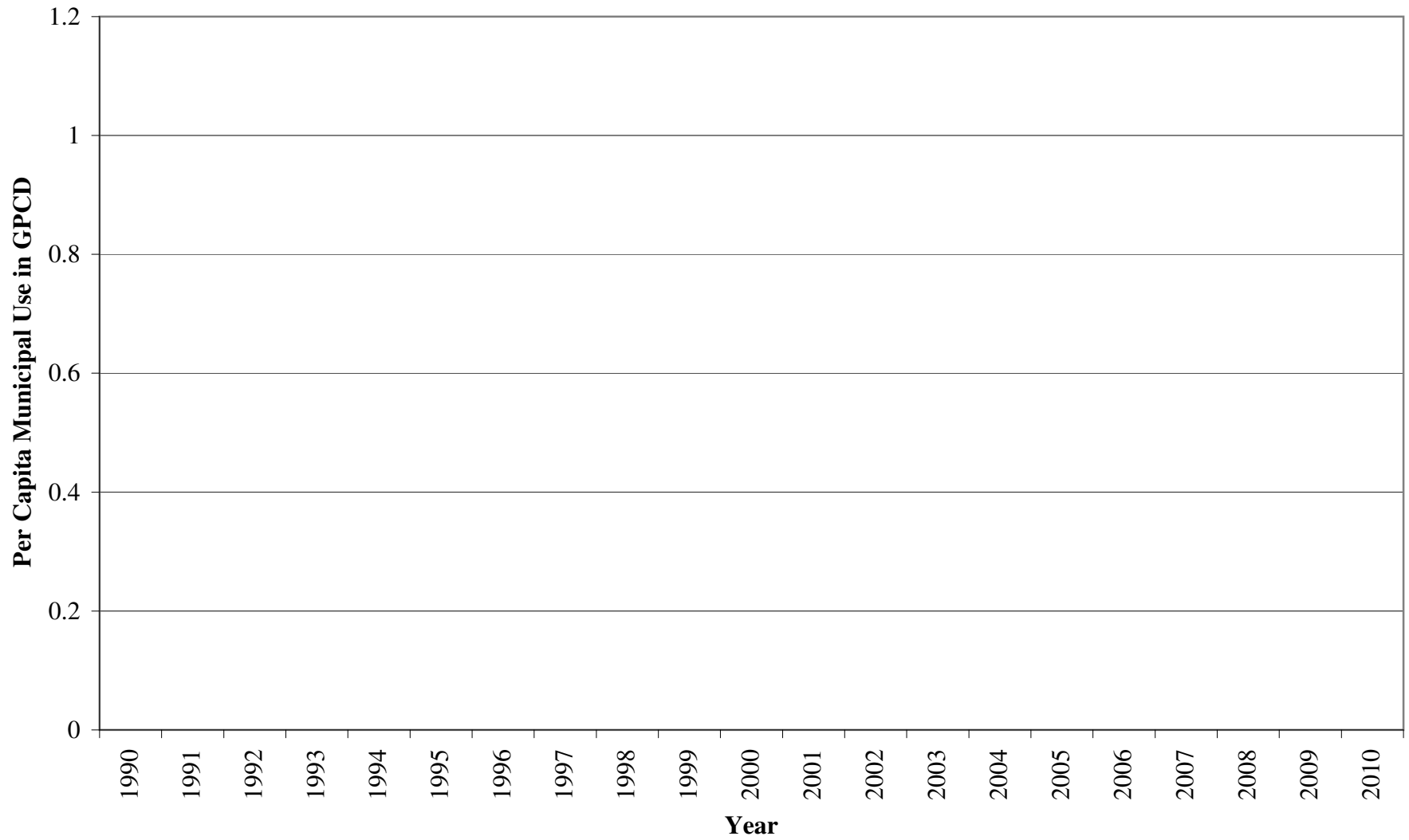
# Historical Water Use



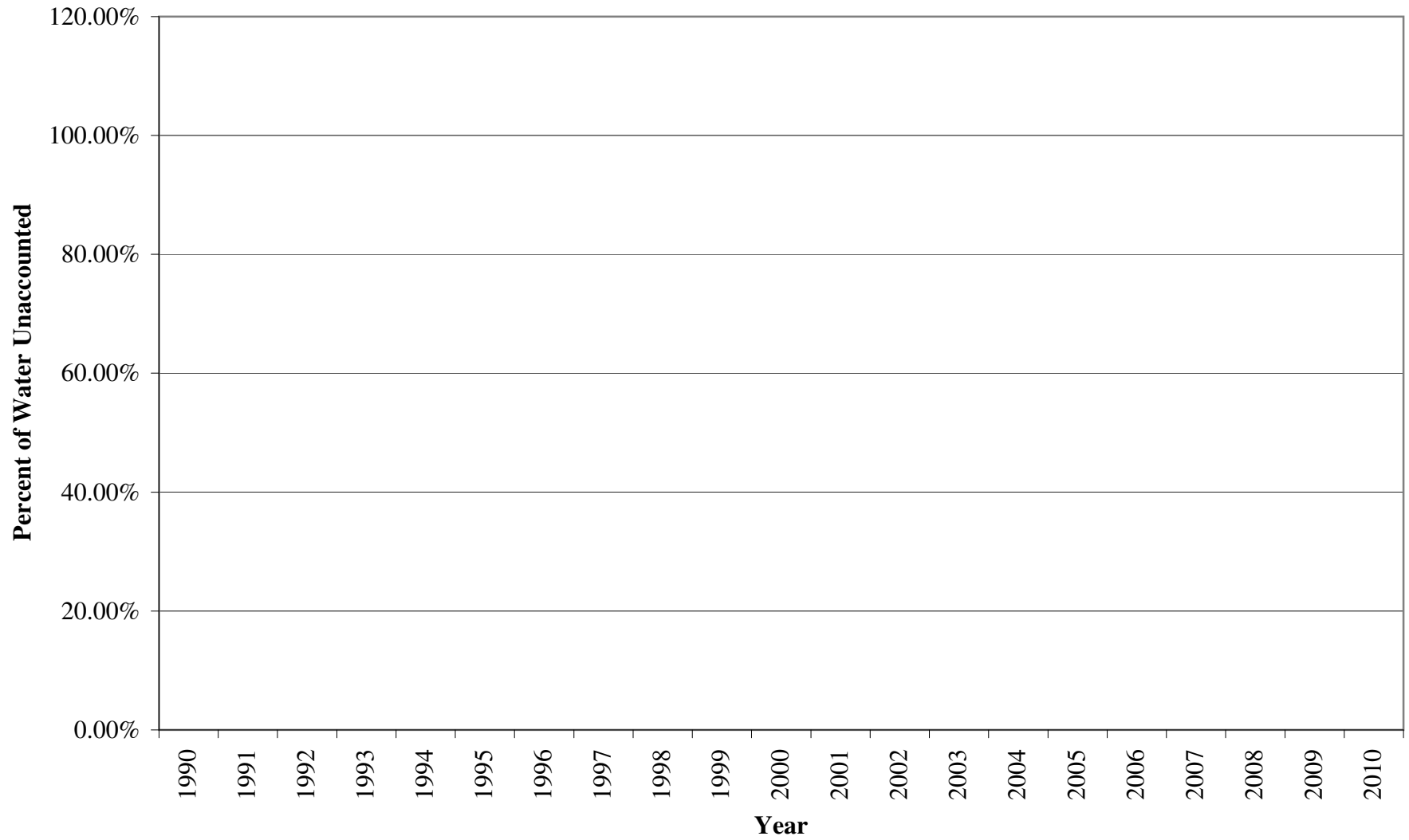
## Historical Water Sales by Classification



## Historical Per Capita Municipal Use



## Historical Percent Unaccounted Water



**APPENDIX E**

**CONSIDERATIONS FOR LANDSCAPE  
WATER MANAGEMENT REGULATIONS**

**APPENDIX E**  
**Considerations for Landscape Water Management Regulations**

A. Purpose

The purpose of these proposed landscape water management regulations is to provide a consistent mechanism for preventing the waste of water resources. To enact these provisions, entities must verify legal authority to adopt such provisions, and must promulgate valid rules, orders, or ordinances.

B. Required Measures

The following landscape water conservation measures are required to be included in the landscape management regulations adopted and enforced in this plan.

1. Lawn and Landscape Irrigation Restrictions

- a. A person commits an offense if the person irrigates, waters, or knowingly or recklessly causes or allows the irrigation or watering of any lawn or landscape located on any property owned, leased, or managed by the person between the hours of 10:00 a.m. and 6:00 p.m. from April 1 through October 31 of any year.
- b. A person commits an offense if the person knowingly or recklessly irrigates, waters, or causes or allows the irrigation or watering of lawn or landscape located on any property owned, leased, or managed by that person in such a manner that causes:
  - i. over-watering lawn or landscape, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area; or
  - ii. irrigating lawn or landscape during any form of precipitation or freezing conditions. This restriction applies to all forms of irrigation, including automatic sprinkler systems; or
  - iii. the irrigation of impervious surfaces or other non-irrigated areas, wind driven water drift taken into consideration.
- c. A person commits an offense if the person knowingly or recklessly allows the irrigation or watering of any lawn or landscape located on any property owned, leased, or managed by the person more than two times per week (Sunday through Saturday).

2. Rain and Freeze Sensors and/or ET or Smart Controllers

- a. Any new irrigation system installed on or after January 1, \_\_\_\_\_, must be equipped with rain and freeze sensing devices and/or ET or Smart controllers in compliance with state design and installation regulations.
- b. A person commits an offense on property owned, leased or managed if the person:

- i. knowingly or recklessly installs or allows the installation of new irrigation systems in violation of Subsection B.2.a; or
- ii. knowingly or recklessly operates or allows the operation of an irrigation system that does not comply with Subsection B.2.a.

3. Filling or Refilling of Ponds

- a. A person commits an offense if the person knowingly or recklessly fills or refills any natural or manmade pond located on any property owned, leased, or managed by the person by introducing any treated water to fill or refill the pond. This does not restrict the filling or maintenance of pond levels by the effect of natural water runoff or the introduction of well water into the pond. A pond is considered to be a still body of water with a surface area of 500 square feet or more.

4. Washing of Vehicles

- a. A person commits an offense if the person knowingly or recklessly washes a vehicle without using a water hose with a shut-off nozzle on any property owned, leased, or managed by the person.

5. Enforcement

- a. Each entity will develop its own set of penalties for violations of the ordinance, order, or resolution. The ordinance, order, or resolution will designate the responsible official(s) to implement and enforce the landscape water conservation measures.

C. Recommended Measures

1. Lawn and Landscape Irrigation Restrictions

- a. A person commits an offense if the person knowingly or recklessly operates a lawn or irrigation system or device on property that the person owns, leases, or manages that:
  - i. has broken or missing sprinkler head(s); or
  - ii. has not been properly maintained to prevent the waste of water.
- b. A person commits an offense if the person knowingly or recklessly overseeds a lawn with rye or winter grass on property that the person owns, leases, or manages. Golf courses and public athletic fields are exempt from this restriction.
- c. All new athletic fields must have separate irrigation systems that are capable of irrigating the playing fields separately from other open spaces.

2. Rain and Freeze Sensors

- a. Existing irrigation systems must be retrofitted with similar rain and freeze sensors capable of multiprogramming within 5 years.

D. Variances

1. In special cases, variances may be granted to persons demonstrating extreme hardship or need. Variances may be granted under the following circumstances:
  - a. the applicant must sign a compliance agreement agreeing to irrigate or water the lawn and/or landscape only in the amount and manner permitted by the variance; and
  - b. the variance must not cause an immediate significant reduction to the water supply; and
  - c. the extreme hardship or need requiring the variance must relate to the health, safety, or welfare of the person making the request; and
  - d. the health, safety, and welfare of the public and the person making the request must not be adversely affected by the requested variance.
2. A variance will be revoked upon a finding that:
  - a. the applicant can no longer demonstrate extreme hardship or need; or
  - b. the terms of the compliance agreement are violated; or
  - c. the health, safety, or welfare of the public or other persons requires revocation.

**APPENDIX F**

**LETTERS TO REGION C AND REGION D  
WATER PLANNING GROUPS**

**APPENDIX F**  
**Letters to Region C and Region D Water Planning Groups**

Date

Region C Water Planning Group  
North Texas Municipal Water District  
P.O. Box 2408  
Wylie, TX 75098

Dear Sir:

Enclosed please find a copy of the recently updated Model Water Conservation Plan for the Member Cities and Customers of the North Texas Municipal Water District. I am submitting a copy of this model plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 2008.

Sincerely,

Jim Parks  
North Texas Municipal Water District

Date

Mr. Jim Thompson  
Chair, Region D Water Planning Group  
P.O. Box 1107  
Atlanta, TX 75551

Dear Mr. Thompson:

Enclosed please find a copy of the recently updated Model Water Conservation Plan for the Member Cities and Customers of the North Texas Municipal Water District. I am submitting a copy of this model plan to the Region D Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 2008.

Sincerely,

Jim Parks  
Executive Director  
North Texas Municipal Water District

**APPENDIX G**  
**ADOPTION OF WATER CONSERVATION PLAN**

**APPENDIX G**  
**Adoption of Water Conservation Plan**

**Municipal Ordinance**  
**Adopting Water Conservation Plan**

**Ordinance No. \_\_\_\_\_**

**AN ORDINANCE ADOPTING A WATER CONSERVATION PLAN FOR THE CITY OF \_\_\_\_\_ TO PROMOTE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION PLAN.**

**WHEREAS**, the City of \_\_\_\_, Texas (the “City”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the City recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the City cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Water Code and the regulations of the Texas Commission on Environmental Quality (the “Commission”) require that the City adopt a Water Conservation Plan; and

**WHEREAS**, the City has determined an urgent need in the best interest of the public to adopt a Water Conservation Plan; and

**WHEREAS**, pursuant to Chapter 54 of the Local Government Code, the City is authorized to adopt such Ordinances necessary to preserve and conserve its water resources; and

**WHEREAS**, the City Council of the City of \_\_\_\_ desires to adopt the North Texas Municipal Water District (the “NTMWD”) Model Water Conservation Plan as official City policy for the conservation of water.

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ THAT:**

**Section 1.** The City Council hereby approves and adopts the NTMWD Model Water Conservation Plan (the “Plan”), attached hereto as Addendum A, as if recited verbatim herein. The City commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 2.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a fine of up to two thousand dollars (\$2,000.00) and/or discontinuance of water service by the City. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a customer fails to comply with the Plan is a separate violation. The City's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 3.** The City Council does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Ordinance was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Ordinance and the subject matter thereof has been discussed, considered and formally acted upon. The City Council further ratifies, approves and confirms such written notice and the posting thereof.

**Section 4.** Should any paragraph, sentence, clause, phrase or word of this Ordinance be declared unconstitutional or invalid for any reason, the remainder of this Ordinance shall not be affected.

**Section 5.** The City Manager or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code.

**Section 6.** The City Secretary is hereby authorized and directed to cause publication of the descriptive caption of this ordinance as an alternative method of publication provided by law.

**Section 7.** {If Applicable} Ordinance No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Passed by the City Council on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Mayor

Attest:

\_\_\_\_\_  
City Secretary

**Municipal Utility District Order  
Adopting Water Conservation Plan**

**Order No. \_\_\_\_\_**

**AN ORDER ADOPTING A WATER CONSERVATION PLAN FOR THE \_\_\_\_\_ MUNICIPAL UTILITY DISTRICT TO PROMOTE THE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION PLAN.**

**WHEREAS**, the \_\_\_\_\_ Municipal Utility District (the “District”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the District recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the District cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Water Code and the regulations of the Texas Commission on Environmental Quality (the “Commission”) require that the District adopt a Water Conservation Plan; and

**WHEREAS**, the District has determined an urgent need in the best interest of the public to adopt a Water Conservation Plan; and

**WHEREAS**, pursuant to Chapter 49 of the Water Code, the District is authorized to adopt such policies necessary to accomplish the purposes for which it was created, including but not limited to the preservation and conservation of water resources; and

**WHEREAS**, the Board of Directors of the District desires to adopt the North Texas Municipal Water District (the “NTMWD”) Model Water Conservation Plan as official District policy for the conservation of water.

**NOW THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF THE \_\_\_\_\_ MUNICIPAL UTILITY DISTRICT THAT:**

**Section 1.** The Board of Directors hereby approves and adopts the NTMWD Model Water Conservation Plan (the “Plan”), attached hereto as Addendum A, as if recited verbatim herein. The District commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 2.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a monetary fine as allowed by law, and/or discontinuance of water service by the District. Proof of a culpable mental

state is not required for a conviction of an offense under this section. Each day a customer fails to comply with the Plan is a separate violation. The District's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 3.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Order was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Order and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 4.** The General Manager or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Order be declared unconstitutional or invalid for any reason, the remainder of this Order shall not be affected.

**Section 6.** {If Applicable} Order No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the Board of Directors on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**Special Utility District Order  
Adopting Water Conservation Plan**

**Order No. \_\_\_\_\_**

**AN ORDER ADOPTING A WATER CONSERVATION PLAN FOR THE \_\_\_\_\_ SPECIAL UTILITY DISTRICT TO PROMOTE THE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION PLAN.**

**WHEREAS**, the \_\_\_\_\_ Special Utility District (the “District”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the District recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the District cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Water Code and the regulations of the Texas Commission on Environmental Quality (the “Commission”) require that the District adopt a Water Conservation Plan; and

**WHEREAS**, the District has determined an urgent need in the best interest of the public to adopt a Water Conservation Plan; and

**WHEREAS**, pursuant to Chapter 65 of the Water Code, the District is authorized to adopt such policies necessary to accomplish the purposes for which it was created, including but not limited to the preservation and conservation of water resources; and

**WHEREAS**, the Board of Directors of the District desires to adopt the North Texas Municipal Water District (the “NTMWD”) Model Water Conservation Plan as official District policy for the conservation of water.

**NOW THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF THE \_\_\_\_\_ SPECIAL UTILITY DISTRICT THAT:**

**Section 1.** The Board of Directors hereby approves and adopts the NTMWD Model Water Conservation Plan (the “Plan”), attached hereto as Addendum A, as if recited verbatim herein. The District commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 2.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a monetary fine as allowed by law, and/or discontinuance of water service by the District. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a

customer fails to comply with the Plan is a separate violation. The District's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 3.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Order was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Order and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 4.** The General Manager or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Order be declared unconstitutional or invalid for any reason, the remainder of this Order shall not be affected.

**Section 6.** {If Applicable} Order No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the Board of Directors on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**Water Supply Corporation Resolution  
Adopting Water Conservation Plan**

**Resolution No. \_\_\_\_\_**

**A RESOLUTION ADOPTING A WATER CONSERVATION PLAN FOR THE \_\_\_\_\_ WATER SUPPLY CORPORATION TO PROMOTE THE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION PLAN.**

**WHEREAS**, the \_\_\_\_\_ Water Supply Corporation (the “WSC”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the WSC recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the WSC cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Water Code and the regulations of the Texas Commission on Environmental Quality (the “Commission”) require that the WSC adopt a Water Conservation Plan; and

**WHEREAS**, the WSC has determined an urgent need in the best interest of the public to adopt a Water Conservation Plan; and

**WHEREAS**, pursuant to Chapter 67 of the Water Code, the WSC is authorized to adopt such policies necessary to preserve and conserve its water resources; and

**WHEREAS**, the Board of Directors of the WSC desires to adopt the North Texas Municipal Water District (the “NTMWD”) Model Water Conservation Plan as official WSC policy for the conservation of water.

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE \_\_\_\_\_ WATER SUPPLY CORPORATION THAT:**

**Section 1.** The Board of Directors hereby approves and adopts the NTMWD Model Water Conservation Plan (the “Plan”), attached hereto as Addendum A, as if recited verbatim herein. The WSC commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 2.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a monetary fine as allowed by law, and/or discontinuance of water service by the WSC. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a

customer fails to comply with the Plan is a separate violation. The WSC's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 3.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Resolution was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Resolution and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 4.** The General Manager or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code. Further, the Board of Directors hereby authorizes the General Manager or his designee to file an amendment to the WSC's tariff to incorporate the Plan therein.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this Resolution shall not be affected.

**Section 6.** {If Applicable} Resolution No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the \_\_\_\_\_ on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**APPENDIX H**  
**ILLEGAL WATER CONNECTIONS AND THEFT OF WATER**

**APPENDIX H**  
**Illegal Water Connections and Theft of Water**

**Municipal Ordinance**  
**Pertaining to Illegal Water Connections and Theft of Water**

**Ordinance No. \_\_\_\_\_**

**AN ORDINANCE PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR THE THEFT OF WATER RELATED TO THE WATER SUPPLY FOR THE CITY OF \_\_\_\_\_.**

**WHEREAS**, the City of \_\_\_\_\_, Texas (the “City”) recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, pursuant to Chapter 54 of the Local Government Code, the City is authorized to adopt such policies necessary to preserve and conserve available water supplies; and

**WHEREAS**, the City seeks to adopt an ordinance pertaining to illegal water connections and theft of water.

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ THAT:**

**Section 1.** The City Council hereby approves and adopts this Ordinance as described herein.

**Section 2.** A person commits an offense of theft of water by any of the following actions:

- (a) A person may not knowingly tamper, connect to, or alter any component of the City’s water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the City.
- (b) If, without the written consent of the City Manager or the City Manager’s designee, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).

(c) A person may not knowingly make or cause a false report to be made to the City of a reading of a water meter installed for metered billing.

(d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

**Section 3.** An offense under this Ordinance is a Class C misdemeanor punishable by a fine of up to two thousand dollars (\$2,000.00) and/or discontinuance of water service by the City.

**Section 4.** The City Council does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting considering this Ordinance was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Ordinance, and the subject matter thereof, has been discussed, considered and formally acted upon. The City Council further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Ordinance be declared unconstitutional or invalid for any reason, the remainder of this Ordinance shall not be affected.

**Section 6.** The City Secretary is hereby authorized and directed to cause publication of the descriptive caption of this ordinance as an alternative method of publication provided by law.

**Section 7.** {If Applicable} Ordinance No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Passed by the City Council on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
Mayor

Attest:

\_\_\_\_\_  
City Secretary

**Municipal Utility District Order  
Pertaining to Illegal Water Connections and Theft of Water**

**Order No. \_\_\_\_\_**

**AN ORDER PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR  
THE THEFT OF WATER RELATED TO THE WATER SUPPLY FOR THE  
\_\_\_\_\_ MUNICIPAL UTILITY DISTRICT.**

**WHEREAS**, the \_\_\_\_\_ Municipal Utility District (the “District”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, pursuant to Chapter 49 of the Water Code, the District is authorized to adopt such policies necessary to accomplish the purposes for which it was created, including but not limited to the preservation and conservation of available water supplies; and

**WHEREAS**, the District seeks to adopt an order pertaining to illegal water connections and theft of water.

**NOW THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF  
THE \_\_\_\_\_ MUNICIPAL UTILITY DISTRICT THAT:**

**Section 1.** The Board of Directors hereby approves and adopts this Order as described herein.

**Section 2.** A person commits an offense of theft of water by any of the following actions:

- (a) A person may not knowingly tamper, connect to, or alter any component of the District’s water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the District.
- (b) If, without the written consent of the District, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).
- (c) A person may not knowingly make or cause a false report to be made to the District of a reading of a water meter installed for metered billing.
- (d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

**Section 3.** An offense under this Order is punishable in accordance with the District's rules and policies regarding rates and may result in disconnection of service.

**Section 4.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting considering this Order was posted at a designated place convenient to the public for the time required by law preceding this meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Order, and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Order be declared unconstitutional or invalid for any reason, the remainder of this Order shall not be affected.

**Section 6.** {If Applicable} Order No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the Board of Directors on this \_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**Special Utility District Order  
Pertaining to Illegal Water Connections and Theft of Water**

**Order No. \_\_\_\_\_**

**AN ORDER PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR  
THE THEFT OF WATER RELATED TO THE WATER SUPPLY FOR THE  
\_\_\_\_\_ SPECIAL UTILITY DISTRICT.**

**WHEREAS**, the \_\_\_\_\_ Special Utility District (the “District”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, pursuant to Chapter 65 of the Water Code, the District is authorized to adopt such policies necessary to preserve and conserve available water supplies; and

**WHEREAS**, the District seeks to adopt an order pertaining to illegal water connections and theft of water.

**NOW THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF  
THE \_\_\_\_\_ SPECIAL UTILITY DISTRICT THAT:**

**Section 1.** The Board of Directors hereby approves and adopts this Order as described herein.

**Section 2.** A person commits an offense of theft of water by any of the following actions:

- (a) A person may not knowingly tamper, connect to, or alter any component of the District’s water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the District.
- (b) If, without the written consent of the District, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).
- (c) A person may not knowingly make or cause a false report to be made to the District of a reading of a water meter installed for metered billing.
- (d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

**Section 3.** An offense under this Order is punishable in accordance with the District’s rules and policies regarding rates and may result in disconnection of service.

**Section 4.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting considering this Order was posted at a designated place convenient to the public for the time required by law preceding this meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Order, and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Order be declared unconstitutional or invalid for any reason, the remainder of this Order shall not be affected.

**Section 6.** {If Applicable} Order No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the Board of Directors on this \_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**Water Supply Corporation Resolution  
Pertaining to Illegal Water Connections and Theft of Water**

**Resolution No. \_\_\_\_\_**

**A RESOLUTION PERTAINING TO ILLEGAL WATER CONNECTIONS  
AND/OR THE THEFT OF WATER RELATED TO THE WATER SUPPLY FOR  
THE \_\_\_\_\_ WATER SUPPLY CORPORATION.**

**WHEREAS**, the \_\_\_\_\_ Water Supply Corporation (the “WSC”), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, pursuant to Chapter 67 of the Water Code, the WSC is authorized to adopt such policies necessary to preserve and conserve available water supplies; and

**WHEREAS**, the WSC seeks to adopt an order pertaining to illegal water connections and theft of water.

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF  
THE \_\_\_\_\_ WATER SUPPLY CORPORATION THAT:**

**Section 1.** The Board of Directors hereby approves and adopts this Resolution as described herein.

**Section 2.** A person commits an offense of theft of water by any of the following actions:

- (a) A person may not knowingly tamper, connect to, or alter any component of the WSC’s water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the WSC.
- (b) If, without the written consent of the WSC, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).
- (c) A person may not knowingly make or cause a false report to be made to the WSC of a reading of a water meter installed for metered billing.
- (d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

**Section 3.** An offense under this Resolution is punishable in accordance with the WSC's rules and policies regarding rates, including its approved tariff, and may result in disconnection of service.

**Section 4.** The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting considering this Resolution was posted at a designated place convenient to the public for the time required by law preceding this meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Resolution, and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5.** Should any paragraph, sentence, clause, phrase or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this Resolution shall not be affected.

**Section 6.** {If Applicable} Resolution No. \_\_\_\_\_, adopted on \_\_\_\_\_, is hereby repealed.

Approved and adopted by the Board of Directors on this \_\_\_ day of \_\_\_\_\_, \_\_\_\_.

\_\_\_\_\_  
President, Board of Directors

Attest:

\_\_\_\_\_  
Secretary

**APPENDIX I**  
**TCEQ WATER CONSERVATION**  
**IMPLEMENTATION REPORT**



Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

Description of Water Conservation Measure:

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Date Implemented: \_\_\_\_\_

### III. TARGETS

- A. Provide the **specific and quantified five and ten-year targets** as listed in water conservation plan for previous planning period.

5-Year Specific/Quantified Target: \_\_\_\_\_

Date to achieve target: \_\_\_\_\_

10-Year Specific/Quantified Target: \_\_\_\_\_

Date to achieve target: \_\_\_\_\_

- B. State if these targets in the water conservation plan are being met.

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C. List the **actual amount of water saved**.

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D. If the targets are not being met, provide an explanation as to why, including any progress on the targets.

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**If you have any questions on how to fill out this form or about the Water Conservation program, please contact the Texas Commission on Environmental Quality at (512) 239-4691.**

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.