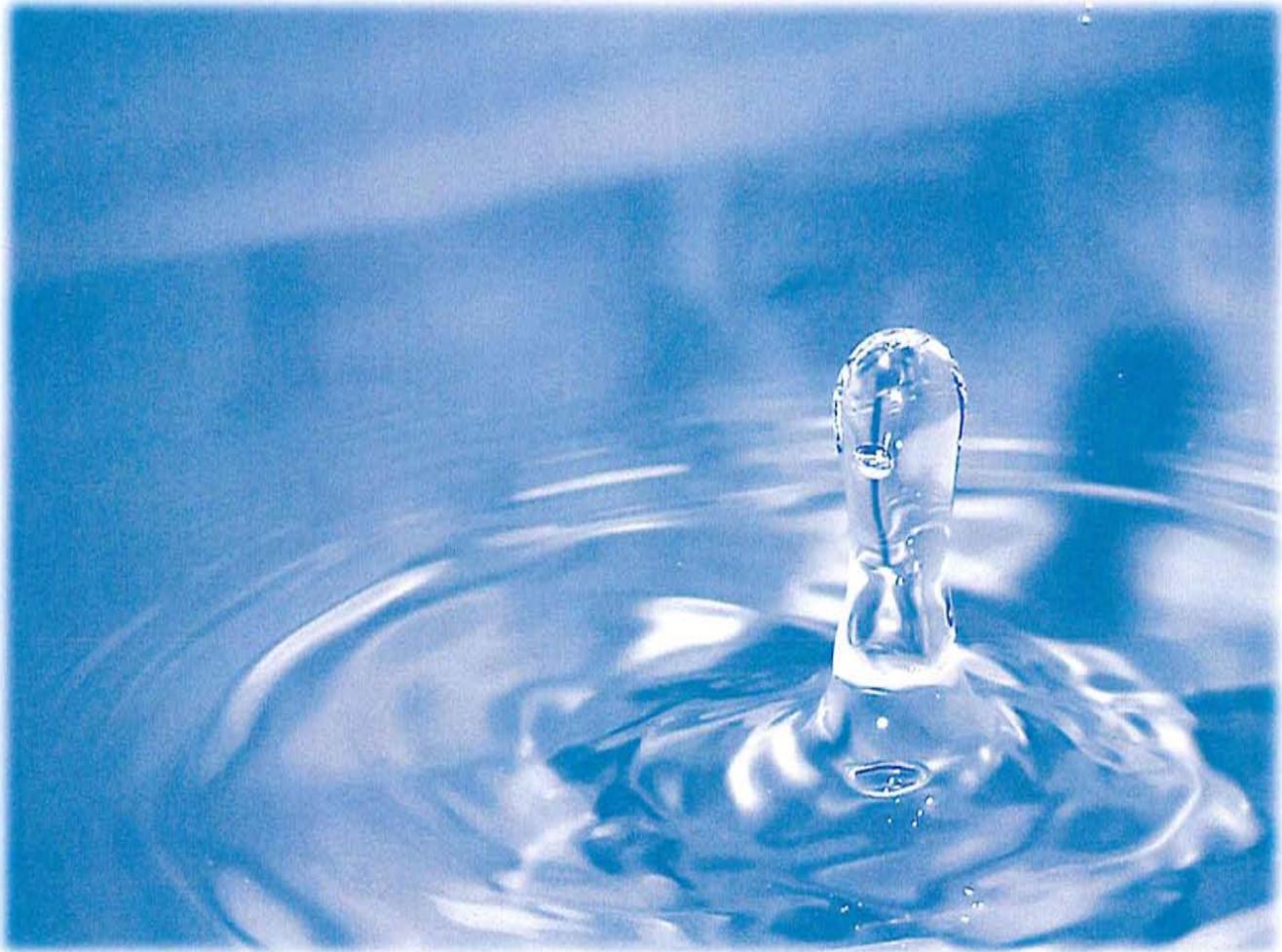


2014

Water Conservation Plan



NORTH RICHLAND HILLS

N[★]RRH

THE CITY OF CHOICE



Texas Commission on Environmental Quality

Water Conservation Implementation Report

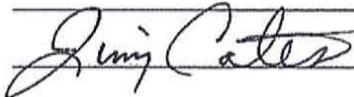
This report must be completed by entities that are required to submit a water conservation plan to the TCEQ in accordance with Title 30 Texas Administrative Code, Chapter 288. Please complete this report and submit it to the TCEQ. If you need assistance in completing this form, please contact the Resource Protection Team in the Water Supply Division at (512) 239-4691.

Name: City of North Richland Hills

Address: 7200 A Dick Fisher Dr. South, North Richland Hills, TX 76180

Telephone Number: 817-427-6440 Fax: 817-427-6444

Form Completed By: Jimmy Cates Title: Operations Manager

Signature:  Date: May 19, 2014

I. WATER USES

Indicate the type(s) of water uses (example: municipal, industrial, or agricultural).

Municipal Use
Industrial Use
_____ Use

II. WATER CONSERVATION MEASURES IMPLEMENTED

Provide the water conservation measures and the dates the measures were implemented.

Description of Water Conservation Measure:

Updated City's water conservation plan to include new targets/goals for
water conservation.

Date Implemented: June 2014

Description of Water Conservation Measure:

Prohibited outdoor watering of landscape and lawns with irrigation or sprinkler systems during the hours of 10 a.m. to 6 p.m. on a daily basis.

Date Implemented: September 2008

Description of Water Conservation Measure:

Implemented leak/detection/repair program. The program consists of methods and techniques to identify and repair hidden or unseen water leaks in the distribution system.

Date Implemented: September 2008

Description of Water Conservation Measure:

Implemented an educational program for school students called WaterWise.

This program is designed to teach and educate elementary grade school students about the importance of water conservation.

Date Implemented: September 2007

Description of Water Conservation Measure:

City staff attends Tarrant Regional Water District Committee meetings and symposiums concerning water conservation methods.

Date Implemented: September 2007

Description of Water Conservation Measure:

Adopted irrigation ordinances requiring rain and freeze sensors.

Date Implemented: July 2007

Description of Water Conservation Measure:

The city's website is updated quarterly to include information about water

conservation and techniques.

Date Implemented: October 2006

Description of Water Conservation Measure:

City staff continues to provide educational presentations or educational material

to customers concerning water conservation.

Date Implemented: October 2006

Description of Water Conservation Measure:

Meter replacement program. The City continues to replace water meters that are

older than 10 years of age on annual basis. About 2,000 meters are replaced

annually under this program.

Date Implemented: August 2006

Description of Water Conservation Measure:

City replaces approximately 9,000-10,000 feet of deteriorated water main lines in the City. These are typically water main lines that have reoccurring water main breaks.

Date Implemented: February 2005

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: 176 CPCD Total Water Use

Date to achieve target: 2014

10-Year Specific/Quantified Target 166 CPCD Total Water Use

Date to achieve target: 2019

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

Data:

2013 Year = 175 GPCD Total Water Use

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

Between 2010-2013 the GPCD has dropped by 11%.

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

If you have any questions on how to fill out this form or about the Water Conservation program, please contact us 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.

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1.0 INTRODUCTION AND OBJECTIVES

This document outlines the City of North Richland Hills' Water Conservation Plan. The objective of the conservation plan is to reduce the quantity required for each water using activity, insofar as is practical, through implementation of efficient water use practices.

Having a dependable water supply has always been a key issue in the development of Texas. The growing population and economic expansion occurring in North Central Texas are placing increased demands on our water supplies. In order to meet the challenge of providing for our current and future needs, we must learn to use the water we already have more efficiently. By stretching our existing supplies we can delay the need for new supplies, minimize the environmental impacts associated with developing new water resources, and postpone the high cost of building the infrastructure (dams, treatment facilities, and pipelines) necessary to capture, treat, and transport the additional water into our homes and businesses.

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. TCEQ guidelines and requirements are included in Appendix A. The City of North Richland Hills has developed this water conservation plan in response to TCEQ guidelines and requirements.

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.
- Encourage efficient outdoor water use.
- To extend the life of current water supplies by reducing the rate of growth in demand.
- To educate the citizens of North Richland Hills about the need for water conservation and the benefits of conserving our most valued natural resource.

2.0 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 (TAC), which is included in Appendix A. 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." The elements in the TCEQ water conservation rules covered in this water conservation plan are listed below.

Minimum Water Conservation Plan Requirements

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

TAC	Plan	Page	Section
288.2(a)(1)(A)	Water Utility Profile	3	3.0
288.2(a)(1)(A)	City of North Richland Hills Utility Profile	23	Appendix B
288.2(a)(1)(A)	City of Watauga Utility Profile	33	Appendix C
288.2(a)(1)(C)	Specification of Water Conservation Goals	3	4.0
288.2(a)(1)(D)	Accurate Metering	4	5.1
288.2(a)(1)(D)	Metering of Customer and Public Uses and Meter Testing	4	5.2
288.2(a)(1)(E)	Universal Metering	4	5.2
288.2(a)(1)(F)	Determination and Control of Unaccounted Water	5	5.4
288.2(a)(1)(G)	Continuing Public Education and Information Program	6	6.0
288.2(a)(1)(H)	Water Rate Structure	7	7.0
288.2(a)(1)(I)	Reservoir System Operation Plan	7	8.1
288.2(a)(1)(J)	Implementation and Enforcement of the Water Conservation Plan	10	9.0
288.2(a)(1)(K)	Coordination with Regional Water Planning Organizations	9	8.6
288.2(a)(1)(K)	Coordination with Regional Water Planning Organizations	42	Appendix D

Conservation Additional Requirements (Population over 5,000)

The TAC includes additional requirements for water conservation plans for cities with a population over 5,000:

TAC	Plan	Page	Section
288.2(a)(2)(A)	Metering of Customer and Public Uses and Meter Testing	4	5.2
288.2(a)(2)(A)	Determination/Control of Unaccounted Water	5	5.4
288.2(a)(2)(A)	Leak Detection and Repair	5	5.5
288.2(a)(2)(B)	Record Management System	5	5.3
288.2(a)(2)(C)	Requirement for Water Conservation Plans by Wholesale Customers	9	8.5

Additional Conservation Strategies

TCEQ rules also list additional optional, but not required conservation strategies, which may be adopted by suppliers. The following optional strategies are included in this plan:

TAC	Plan	Page	Section
288.2(a)(3)(B)	Ordinances, Plumbing Codes or Rules on Water Conserving Fixtures	8	8.3
288.2(a)(3)(D)	Reuse and Recycling of Wastewater	8	8.2
288.2(a)(3)(F)	Water Waste Prohibition	8	8.4
288.2(a)(3)(G)	Monitoring of Effectiveness and Efficiency Annual Water Conservation Report	6	5.6

3.0 WATER UTILITY PROFILE

Included in Appendix B to this water conservation plan is a modified North Richland Hills Water Utility Profile based on the format recommended by the TCEQ. Some additional sections were added in order to gather the information necessary to assess the effectiveness of the water conservation plan.

The City of Watauga is the City of North Richland Hills' only wholesale customer and is contractually obligated to develop and implement a conservation plan that meets applicable TCEQ Water Conservation Plan Requirements. Appendix C includes the City of Watauga's Water Utility Profile.

4.0 SPECIFICATION OF WATER CONSERVATION GOALS

Current TCEQ regulations require the adoption of specific water conservation goals for a water conservation plan. As part of the plan adoption, the City of North Richland Hills will develop 5-year and 10-year goals for per capita municipal use, following TCEQ procedures described in the water utility profile, Appendix B for the City of North Richland Hills. The goals for this water conservation plan include the following:

- Current five (5) year average per capita use for the City of North Richland Hills is 192 gallons per capita per day. The projected reduction for the City is 1/2% per year due to elements in this plan. An anticipated 1/2% reduction per year will keep the per capita municipal water use below 172.5 gallons per capita per day in 2019 (5-year goal) and 170 gallons per capita per day in 2024 (10-year goal).
- The capita per day for current residential use is 102 gallons. The projected reduction for residential is 1/2% per year due to elements in this plan. This reduction will result in a 5-year goal of 99.5 gallons per capita per day in 2019 and 97 gallons per capita per day in 2024 for the 10-year goal.
- Keep the level of unaccounted water in the system below 6% annually in 2014 and subsequent years, as discussed on page 5, Section 5.4.

- Maintain meter replacement and repair programs, as discussed on page 4, Section 5.2.
- Decrease waste in lawn irrigation by continuing enforcement of the landscape water management ordinance, as discussed on page 8, Section 8.4.
- Raise public awareness of water conservation and encourage responsible public behavior with a public education and information program, as discussed on page 6, Section 6.0.

5.0 METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR

One of the key elements in water conservation is careful tracking of water use and control of losses through illegal diversions and leaks. Careful metering of water deliveries and water use, detection and repair of leaks in the distribution system and regular monitoring of unaccounted water are important in controlling losses.

5.1 Accurate Metering of Treated Water Deliveries

North Richland Hills supplies all of the water used by its customers. Water deliveries are metered by the City of North Richland Hills using a meter accuracy of $\pm 5\%$. These meters are calibrated by the City's wholesale suppliers on an annual basis to maintain their level of accuracy.

North Richland Hills has four (4) main points of entry for treated water intake into the City. Three (3) entry points are from the City of Fort Worth and one (1) entry point from Trinity River Authority (TRA). Each point of entry contains a master meter that is the property of the wholesale provider (Fort Worth/TRA). By the wholesale contract, these entry point meters, are tested and calibrated to ensure accuracy at least once per year.

The City of North Richland Hills is the water supplier for the City of Watauga. The City of North Richland Hills has installed several meters at the main entry points into the City of Watauga. The main entry point meters are tested, calibrated, and maintained by the City of North Richland Hills on a regular basis.

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

All connections to the water system are metered connections. All meters are maintained within an acceptable operating accuracy range as defined by the manufacturer or American Water Works Association (AWWA) Standards for Meter Accuracy, whichever is more stringent. Non-functioning meters and meters that indicate reduced or high usage will be flagged during the electronic billing process. These meters will be checked, field tested, and replaced when found to be out of the manufacturer specifications or not meeting AWWA Standards.

The City of North Richland Hills has a Meter Replacement Program that is currently funded annually. The goal of the program is to replace approximately 2,000 customer water meters that are older than ten (10) years of age on an annual basis.

The City also replaces water meters on an as needed basis. These meters are usually suspected of inaccurate readings, such as reading high or too low, erratic, or not reading any flow at all.

This aggressive water meter replacement program helps to ensure the meters are accurate and helps to reduce the unaccounted for water in the City.

5.3 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the City of North Richland Hills record management system allows for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information will be included in an annual water conservation report, as described on page 6, Section 5.6.

The City of North Richland Hills will continue to maintain a record management system that separates the monthly usage in the following customer categories; residential, commercial, public/institutional, wholesale, industrial usage and others.

5.4 Determination and Control of Unaccounted Water

Unaccounted water is the difference between water purchased from the City of Fort Worth and TRA and metered deliveries to North Richland Hills' customers. Authorized but unmetered uses would include fire-fighting, flushing of water lines, and uses associated with new construction. Unaccounted water can include several categories:

- Inaccuracies in customer meters. Customer meters tend to run more slowly or become erratic as they age and under-report actual use.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft.

Measures to control unaccounted water are part of the routine operations of the City. Maintenance crews and personnel are directed to 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 are directed to watch for and report signs of illegal connections so they can be addressed quickly.

As shown in the Water Utility Profile, unaccounted water has varied from 0.6% to 6% in the last five years. With the elements described in this plan, the City of North Richland Hills intends to maintain the unaccounted water below 6% in 2014 and subsequent years.

5.5 Leak Detection and Repair

The City of North Richland Hills monitors the water distribution system and customer service connections for water leaks. This is done by City personnel who are in the field. Any water leaks found are reported immediately and repaired as quickly as possible.

The City also conducts regular inspections throughout the City for leaks on large water transmission lines. Areas along drainage streams and limited access areas are regularly investigated for potential water leaks.

The Public Works Department is responsible for repairing water line leaks. Typically all water leaks are repaired within 24 hours after they have been reported. Large main line water leaks require quick response and the department provides this quick response 24 hours a day.

The Public Works Department also has an annual program for replacing water lines that are old, deteriorated, and have had numerous water leaks. The department replaces approximately 10,000 linear feet of water lines in the City under this program. An asset management program is used to track all water line breaks. This asset management program helps the department to determine which water lines are in need of replacement.

5.6 Monitoring of Effectiveness and Efficiency Annual Water Conservation Report

Appendix B is a modified water utility profile form that will be used in the development of an annual water conservation report for the City of North Richland Hills. This form will be completed by May 1st of 2014 and will be used to monitor the effectiveness and efficiency of the water conservation plan. This will help the City to plan conservation-related activities for the following years. The water utility profile 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 modified water utility profile and annual water conservation report will be sent to the City of Fort Worth and TRA who will work with Tarrant Regional Water District (TRWD) to monitor regional water conservation trends.

6.0 CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN

The City of North Richland Hills will continue to promote conservation through public education by:

- Participating in various conservation programs with TRWD.
- Making conservation information available at the public library and on the City of North Richland Hills' website. Links on the City's website will be provided to the *Texas Smartscape* website and to information on water conservation from TRWD, Texas Water Development Board (TWDB), and TCEQ websites.
- Include a water conservation message in the City's "News and Notes" publication on an annual basis. This publication is sent to North Richland Hills customers' and includes information about City activities, events, and advertisements.
- Insert water conservation information with water bills. Inserts will include material developed by North Richland Hills' staff and material obtained from TRWD, TWDB, TCEQ, and other sources.

- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Make information on *Texas Smartscape* principles, water conservation brochures, and other water conservation materials available to the public at City Hall and other public places.
- In 2008 the City of North Richland Hills began a partnership with TRWD promoting an educational program called "Learning to Be Water Wise". The program is designed for educating elementary school students and their parents on water conservation. Activities include instructional manuals and activity books, supplying and installing low flow faucet fixtures, and surveys and input on water conservation techniques. The City along with TRWD funds the program annually. Presently, 5th grade students in the City's local elementary schools are targeted for this program. The City will continue this program providing funds are available on an annual basis

7.0 WATER RATE STRUCTURE

The City of North Richland Hills' rate structure is provided in Table 7.0 below:

Table 7.0 Rate Structure

Meter Size (inches)	¾"	1"	2"	4"	6"
Minimum Volume (CCF)	267	446	1,423	2,849	8,899
Minimum Bill	\$9.75	\$16.28	\$51.97	\$104.03	\$324.97
Water Rates	Minimum Charge + \$2.95 per 100 cubic feet over				
Water Pass Through*	\$1.10 x total consumption				

North Richland Hills will continue consideration of various rate plans to insure cost effectiveness and compliance with state regulations.

- * The water pass through rate is the fee charged to North Richland Hills' customers for wastewater disposal. The amount is based on the rate charge that the City's wholesale provider (Fort Worth) sets for wastewater treatment and operation and maintenance cost.

8.0 OTHER WATER CONSERVATION MEASURES

8.1 Reservoir System Operation Plan

North Richland Hills purchases treated water from the City of Fort Worth and TRA Northern Region which purchases untreated surface water from TRWD. North Richland Hills does not purchase untreated surface water supplies and therefore does not have a reservoir system operation plan.

8.2 Reuse and Recycling of Wastewater

The City of North Richland Hills does not own and operate its own wastewater treatment plant. The City's wastewater is treated by TRA and the City of Fort Worth.

8.3 Ordinances, Plumbing Codes, or Rules on Water Conserving Fixtures

The State of Texas 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. The City of North Richland Hills follows these standards.

8.4 Water Waste Prohibition

Landscape irrigation and outdoor watering are responsible for a large portion of the water wasted in the State of Texas. The City of North Richland Hills has adopted the following water conservation measures in an effort to reduce the amount of wasted water:

- Prohibition of outdoor watering with irrigation systems from 10:00 a.m. to 6:00 p.m. every day of the year. Watering with hand-held hoses, drip irrigation and soaker hoses is allowed.
- Requirement that all irrigation systems installed on or after October 25, 1999, with the exception of those associated with agricultural and/or single family residential uses, must be equipped with rain and freeze sensors.
- Requirement that all agricultural and/or single family residential irrigation system installed within the City on or after August 1, 2006 must be equipped with rain and freeze sensors.
- Prohibition of irrigation systems that result in a substantial amount of water to fall upon impervious surfaces, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area.
- Prohibition of poorly maintained irrigation systems that waste water.
- Prohibition of outdoor watering during any form of precipitation.
- Requirement for customers to repair a water service line or irrigation line leaking on private property within a designated time period as directed by the North Richland Hills Public Works Department.
- The City of Fort Worth and other regional water providers (North Texas Municipal Water District, Tarrant Regional Water District, Upper Trinity Regional Water District, the Trinity River Authority and the City of Dallas) have collaborated and agreed upon implementing a year round no more than twice per week watering schedule. The City will have a mandatory twice per week water schedule similar to Stage 1 of its drought plan. The schedule is included as Table 8.1. The two instances when this schedule has been implemented during Stage 1 drought (in 2011 and currently in

2013-2014) it has shown to have savings of overall water usage of 7 percent and 8 percent respectively.

Table 8.1: Twice Per Week Watering Schedule

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
No outdoor watering	Non residential	Residential addresses ending in (0, 2, 4, 6, 8)	Residential addresses ending in (1, 3, 5, 7, 9)	Non residential	Residential addresses ending in (0, 2, 4, 6, 8)	Residential addresses ending in (1, 3, 5, 7, 9)

Failure to comply with any portion of this section will constitute a violation and may be subject to enforcement of a fine up to Two Thousand Dollars (\$2,000.00) per violation. Each day that a violation is permitted to exist shall constitute a separate offense.

8.5 Requirement for Water Conservation Plans by Wholesale Customers

The City of North Richland Hills is a wholesale water supplier for the City of Watauga. The City of Watauga must develop and implement a water conservation plan as described in this section. Every contract for the wholesale sale of water 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 TAC. The requirement will also extend to each successive wholesale customer in the resale of the water.

8.6 Coordination with Regional Water Planning Organizations

Appendix D includes letters sent to the City of Fort Worth, TRA, the TRWD, TCEQ and the City of Watauga. A copy of the water conservation plan was included with each letter.

8.7 Request for Variance

The Public Works Operations Manager or his/her designee may grant a temporary variance for water use prohibited by this plan if it is determined that an emergency condition resulting in an adverse effect to health, sanitation, or fire protection of a customer, person, or entity would result if a variance is not granted. A temporary variance may also be granted if it is determined that a customer, person, or entity is caused undue hardship or financial burden if a variance is not granted.

Outdoor watering at a service address with large multi-station irrigation systems may take place in accordance with a variance granted by the Public Works Operations Manager or his/her designee if it is determined that the property cannot be adequately irrigated in a single day.

A temporary variance may also be granted to playing fields which require watering to maintain league standards.

Skinned areas of sports fields may be watered as needed for dust control without applying for a temporary variance.

In order to receive a written variance from the Public Works Operations Manager or his/her designee the customer, person, or entity must provide a written request including:

- Name and address of the person requesting the variance.
- Location of the proposed water use.
- Detailed statement of potential damage and reason for the variance.
- The volume of water needed and specific purpose of water use.
- Period of time the variance is needed.
- Detailed statement of water conservation measures that are being used.
- Any diagram or other explanation that demonstrates the need for a variance.

9.0 IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN

Appendix E includes a copy of the ordinance passed by the City Council which formally approves and adopts this water conservation plan. The ordinance includes penalties for non-compliance and designates responsible officials to implement and enforce the water conservation plan.

Appendix F includes a copy of the City's adopted Landscape Water Management Ordinance and Amendment to Outside Watering Ordinance.

APPENDIX A

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

**Texas Commission on Environmental Quality Rules on Water Conservation
Plans for Municipal Uses by Public Water Suppliers**

TEXAS ADMINISTRATIVE CODE (TAC)

Title 30	Environmental Quality
Part 1	Texas Commission on Environmental Quality
Chapter 288	Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements
Subchapter A	Water Conservation Plans
Rule §288.1	Definitions

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) Best Management Practices - Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.
- (4) Conservation - Those practices, techniques, and technologies that reduce the consumption 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.
- (5) Commercial Use - The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.

- (6) 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).
- (7) 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, and the development of power by means other than hydroelectric, but does not include agricultural use.
- (8) Institutional Use – The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.
- (9) 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 from a public water supplier.
- (10) 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.
- (11) Mining Use - The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.
- (12) Municipal Use - The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.
- (13) Nursery Grower - A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media, who grows more than 50% of the products that the person either sells or leases, regardless of 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.
- (14) 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.

- (15) Public Water Supplier - An individual or entity that supplies water to the public for human consumption.
- (16) Residential Use – The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.
- (17) Residential Gallons per Capita per Day – The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.
- (18) 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.
- (19) 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.
- (20) 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.
- (21) Total Use - The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.
- (22) Total Gallons per Capita per Day (GPCD) – The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.
- (23) 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).
- (24) 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.

- (25) Wholesale Use – Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.
-

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; amended to effective January 10, 2008, 33 TexReg 193; amended to be effective December 6, 2012, 37 TexReg 9515

TEXAS ADMINISTRATIVE CODE

Title 30	Environmental Quality
Part 1	Texas Commission on Environmental Quality
Chapter 288	Water Conservation Plans, Drought Contingency Plans, Guidelines And Requirements
SubChapter A	Water Conservation Plans
Rule §288.2	Water Conservation Plans for Municipal Uses by Public Water Suppliers

(a) A water conservation plan for municipal water use by public water suppliers must 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 water suppliers must include the following elements:
 - (A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;
 - (B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) – (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) – (vi) of this subparagraph:
 - (i) Residential;
 - (1) Single family;
 - (2) Multi-family;
 - (ii) Commercial;
 - (iii) Institutional;
 - (iv) Industrial;
 - (v) Agricultural; and
 - (vi) Wholesale.
 - (C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. 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 water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);
 - (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 operation 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;
 - (B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must

provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

- (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) 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 every five years to coincide with the regional water planning group.

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; amended to be effective December 6, 2012, 37 TexReg 9515

TEXAS ADMINISTRATIVE CODE

Title 30	Environmental Quality
Part 1	Texas Commission on Environmental Quality
Chapter 288	Water Conservation Plans, Drought Contingency Plans, Guidelines And Requirements
SubChapter A	Water Conservation Plans
Rule §288.5	Water Conservation Plans for Wholesale Water Suppliers

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

- (1) Minimum Requirements – All water conservation plans for the wholesale water suppliers must include the following elements:
 - (A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;
 - (B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;
 - (C) a description as to which practice(s) and/or devices(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;
 - (D) a monitoring and record management program for determining water deliveries, sales, and losses;
 - (E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;
 - (F) a requirement of every water supply contract entered into or renewed after official adoption of the water conservation plan, 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 of 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 applicable provisions of this chapter;

- (G) 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. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;
 - (H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and
 - (I) documentation or coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.
- (2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:
- (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) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;
 - (C) a program for reuse and/or recycling of wastewater and/or graywater; and
 - (D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

- (3) Review and update requirements. The wholesale water supplier 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. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.5 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; amended to be effective December 6, 2012, 37 TexReg 9515

APPENDIX B

**FORM FOR CITY OF NORTH RICHLAND HILLS
WATER UTILITY PROFILE AND WATER CONSERVATION REPORT**

APPENDIX B
Customer Water Conservation Report
Due May 1 of Every Year

Name of Utility: City of North Richland Hills

Address & Zip: 7200 A Dick Fisher Drive South

Telephone Number: (817) 427-6440 Fax: (817) 427-6444

Form Completed By: Alan Knapp

Title: PublicWorks, Utility Superintendent

Signature:  Date: May 19, 2014

Name and Phone Number of Person/Department responsible for implementing a water conservation program:

Jimmy Cates, Public Works Operations Manager (817) 427-6460

UTILITY PROFILE

I. POPULATION CUSTOMER DATA

A. Population and Service Area Data

1. Service area size (square miles): 18.2
2. Current population of service area: 65,690
3. Current population served by utility: 65,690
 - a: Water 65,690
 - b: Wastewater 65,690

4. Population served by water utility service area for the previous five years:

YEAR	2009	2010	2011	2012	2013
NRH	62,569	63,343	63,420	64,355	65,690

5. Projected population in the following decades:

YEAR	2020	2030	2040	2050	2060
NRH	69,734	73,417	75,456	77,495	79,045

6. List specific source(s)/method(s) for the calculation of current and projected population:

- Current and projected population obtained through North Central Texas Council of Governments and Freese and Nichols, Inc.

B. Active Connections

1. Current number of active connections by user type. Check whether multi-family service is counted as:

Residential X
 Commercial

TREATED WATER USERS	METERED	NON-METERED	TOTAL
Residential	19,595	0	19,595
Commercial	1,185	0	1,185
Industrial	14	0	14
Public	108	0	108
Other (Fire Hydrant)	45	0	45

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

YEAR	2011	2012	2013
TOTAL	144	199	225

C. High Volume Customers

List annual water use for the ten highest volume customers (indicate if treated or raw water delivery). Provide date of most recent water use audit - if never audited, please indicate so.

	CUSTOMER	USE 1,000 Gallons/Year	TREATED OR RAW WATER	DATE OF LAST WATER USE AUDIT
1	Doskocil Food	135,559	Treated	Never
2	North Hills Hospital	51,027	Treated	Never
3	Birdville Independent School District	47,672	Treated	Never
4	BGPC Equestrian GP	39,568	Treated	Never
5	Chesapeake Operation Inc.	31,493	Treated	Never
6	FX3 Apt./Remington Oaks Apts.	25,946	Treated	Never
7	Silver Creek Apartments	21,537	Treated	Never
8	APWP Green REIT LLC Apts.	18,063	Treated	Never
9	Alliance PP2 Apts.	17,644	Treated	Never
10	Bluffs at Iron Horse Apartments	17,287	Treated	Never

II. WATER USE DATA FOR SERVICE AREA

A. Water Accounting Data

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

TOTAL DIVERTED AND TREATED WATER DELIVERIES AND SALES BY MONTH					
Year					
Month	2009	2010	2011	2012	2013
January	270,798	257,641	228,043	265,938	234,955
February	251,608	207,865	247,897	222,737	229,246
March	291,565	234,620	310,507	267,261	296,384
April	303,763	294,879	379,111	278,997	294,777
May	331,217	441,174	342,722	426,407	352,840
June	448,883	489,749	584,459	409,429	433,473
July	530,056	497,521	729,756	639,734	500,474
August	533,817	595,699	735,674	550,999	533,971
September	370,966	396,241	517,446	505,559	448,131
October	291,610	434,190	378,430	367,679	333,931
November	258,604	365,508	296,559	329,790	285,502
December	245,108	320,468	228,767	308,289	257,776
TOTAL	4,127,496	4,515,555	4,977,671	4,572,879	4,201,460

Accounting data taken from master meters located at four points of entry along the perimeters of the City (7699 Airport Freeway, 5105 Western Center Boulevard, 4145 Stanley Keller Road, and 1101 Glade Road).

2. Indicate whether water is supplied from:

a. Untreated surface water sources: _____

b. Another utility as treated water: X

2a. For entities that treat their own water:

Does utility operate a raw water intake? If so, indicate intake location and minimum elevations of safe operation.

Location of raw water intake

Elevation

_____ N/A _____

_____ N/A _____

2b. For entities that purchase treated water from another utility, list water supply sources and quantity purchased from each source:

TREATED WATER SOURCES PURCHASED	QUANTITY
City of Fort Worth	2,653,635,840
Trinity River Authority	1,547,829,000

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

ACCOUNT TYPE	2009	2010	2011	2012	2013
Residential	2,371,501	2,450,634	2,924,124	2,656,305	2,452,410
Commercial	634,461	662,663	737,811	754,384	400,725
Public/Institutional	155,824	181,930	187,317	219,064	191,038
Industrial	144,688	146,551	116,865	55,754	142,047
Wholesale	953,499	996,199	941,899	942,910	830,013
Other (Fire Hydrants)	21,992	45,371	61,653	22,606	54,381
Total Sold	4,281,965	4,483,348	4,969,669	4,651,023	4,070,613

Residential: Single and multifamily residences
Commercial: Restaurants, retail, office
Public/Institutional: Municipal, airports, schools, hospitals
Industrial: Large manufacturing
Wholesale: Deliveries to successive customers
Other: Uses not included in above categories.
Please describe: Fire Hydrants

4. Calculate gallons per capita per day by account types for the past five years:

ACCOUNT TYPE	GALLONS PER CAPITA PER DAY BY ACCOUNT TYPE (Total water diverted or				
	2009	2010	2011	2012	2013
Residential	9	102	122	111	102
Commercial	2	28	31	31	17
Public/Institutional	7	8	8	9	8
Industrial	6	6	5	2	6
Wholesale	4	42	39	39	35
Other	.9	1.90	2.57	.94	2.27
Total	177.92	187.90	207.57	192.94	170.27

5. List previous five years records for water loss (the difference between water diverted or treated and water delivered or sold). The goal for percent of unaccounted for water is 6%.

YEAR	AMOUNT (Gallons)	% OF TOTAL WATER DIVERTED OR TREATED
2009	23,849,400	0.60%
2010	259,509,199	5.70%
2011	257,062,902	5.6%
2012	163,528,922	3.58%
2013	97,452,565	2.32%

6. List previous five years records for water reuse. Reuse is 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.

Year	Amount/Gallons	% of Total Water Diverted or Treated
N/A	N/A	N/A

7. Municipal per capita water use (in gallons per day) for previous five years. Municipal per capita water use is the sum total of water diverted into a water supply system for residential, commercial and public and institutional uses divided by total population served. GPCD includes water losses.

YEAR	POPULATION	TOTAL WATER DIVERTED OR TREATED (1,000 Gallons)	Municipal Per Capita Use (GPCD)
2009	62,569	4,127,996	181
2010	63,343	4,515,555	195
2011	63,420	4,977,671	215
2012	64,355	4,572,879	195
2013	65,690	4,201,460	175

8. Previously stated per capita goals from 2009 plan:

5 year: 176 GPCD
 10 year: 166 GPCD

9. Did water use (GPCD) increase or decrease from previous year? Decrease
 Percent increase or decrease from previous year? 11%
10. Briefly discuss reasons for the increase or decrease in municipal water use.

Municipal water use decreased in 2014 due to mandatory prohibited watering between 10 a.m. – 6 p.m. and ongoing Drought Contingency Stage 1 implementation.

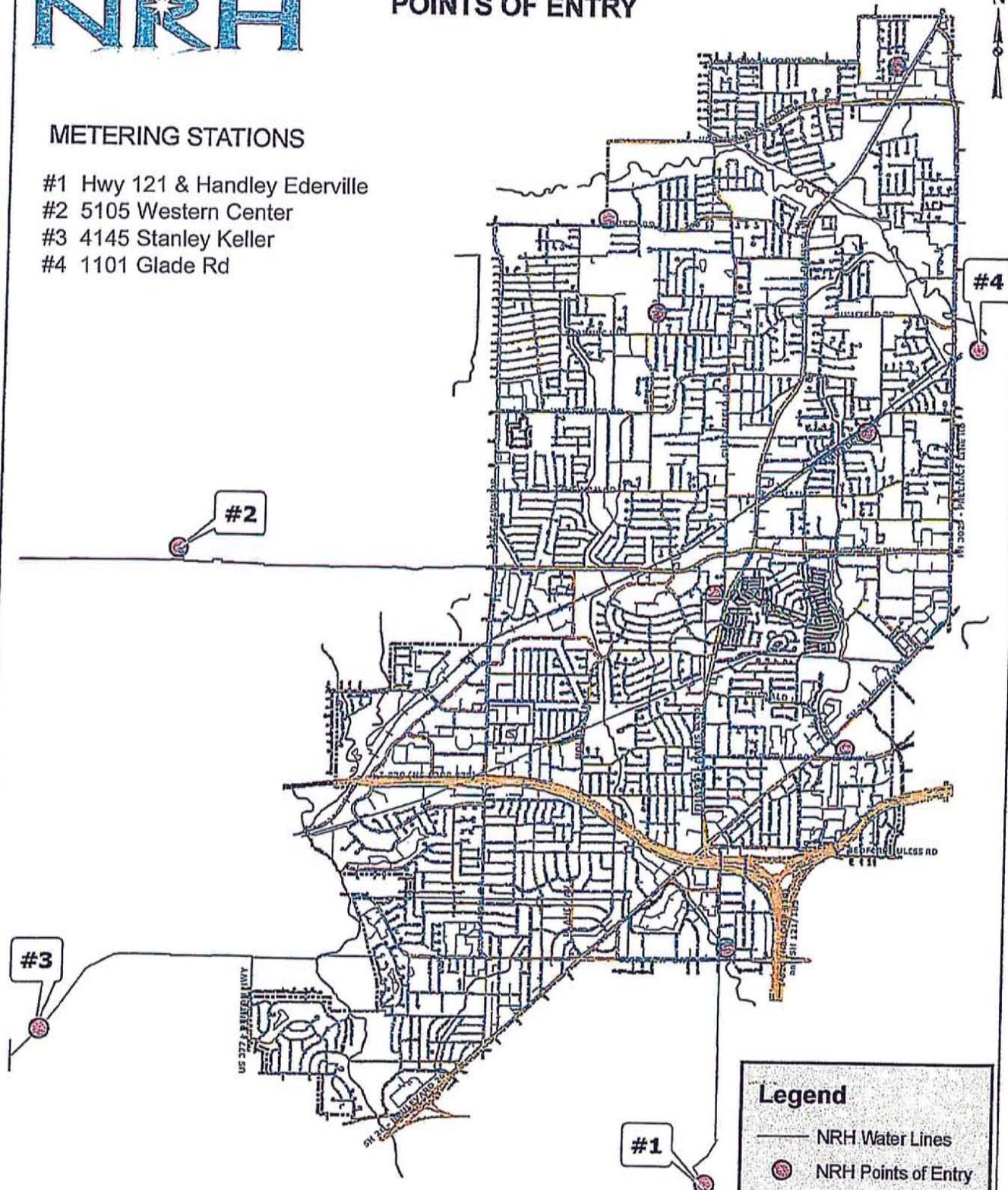
NRH

POINTS OF ENTRY



METERING STATIONS

- #1 Hwy 121 & Handley Ederville
- #2 5105 Western Center
- #3 4145 Stanley Keller
- #4 1101 Glade Rd



Legend

- NRH Water Lines
- NRH Points of Entry

DXF-LAYER

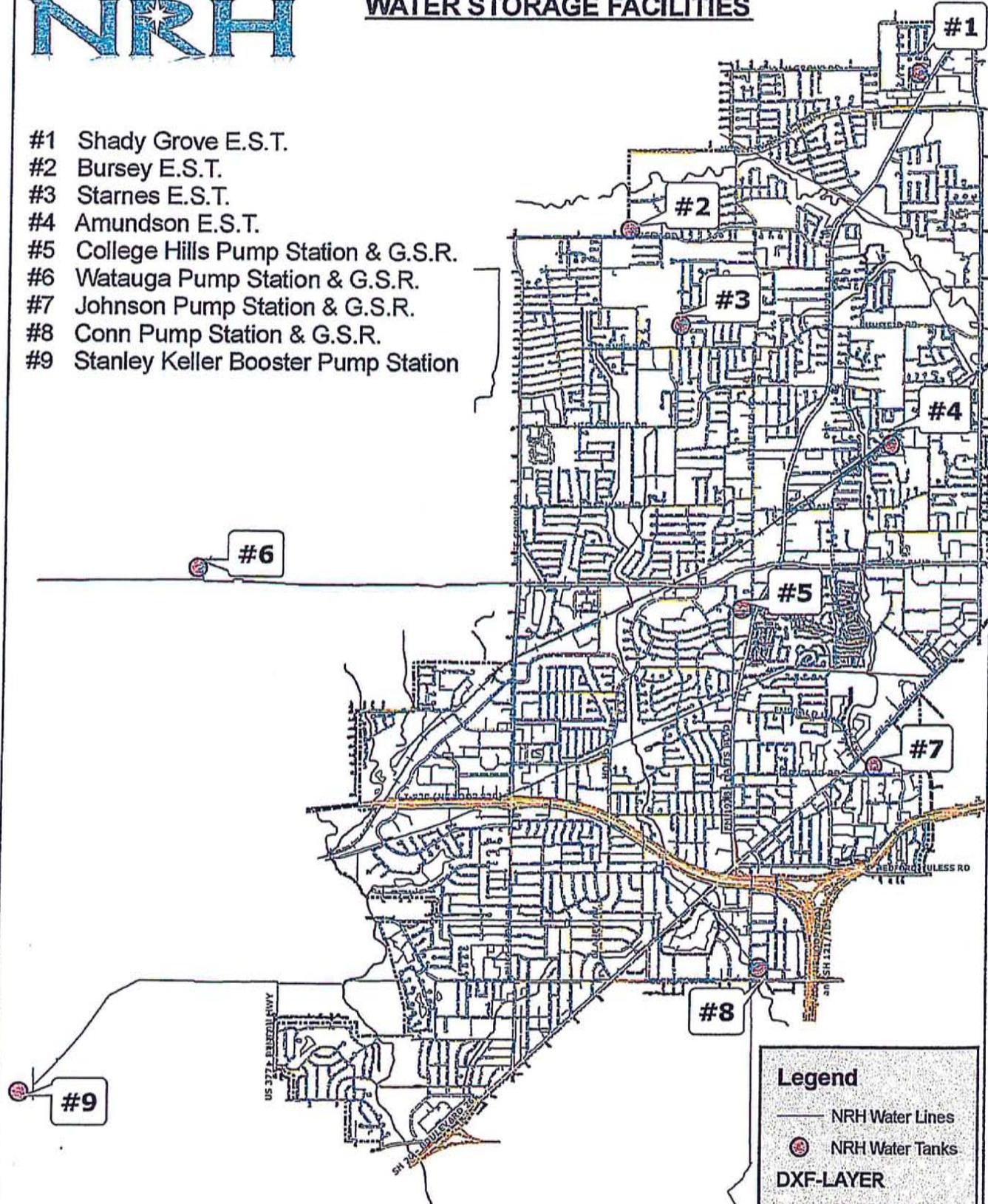
- - - - - City Limit Line
- NRH Major Roads

5-27-2010
Howell



WATER STORAGE FACILITIES

- #1 Shady Grove E.S.T.
- #2 Bursey E.S.T.
- #3 Starnes E.S.T.
- #4 Amundson E.S.T.
- #5 College Hills Pump Station & G.S.R.
- #6 Watauga Pump Station & G.S.R.
- #7 Johnson Pump Station & G.S.R.
- #8 Conn Pump Station & G.S.R.
- #9 Stanley Keller Booster Pump Station



Legend

- NRH Water Lines
- ⊗ NRH Water Tanks

DXF-LAYER

- ⋯ City Limit Line
- NRH Major Roads

5-27-2010

Thowell

APPENDIX C

**FORM FOR CITY OF WATAUGA'S
WATER UTILITY PROFILE
(A WHOLESALE CUSTOMER OF THE CITY OF NORTH RICHLAND HILLS)**

**CITY OF WATAUGA
WATER UTILITY PROFILE
AND WATER CONSERVATION REPORT**

APPLICANT DATA

Name of Utility: City of Watauga
Address & Zip: 7105 Whitley Road
Telephone Number: (817) 514-5851 Fax: (817) 427-0935
Form Completed By: Brandon Dupree Title: Public Works Utility Superintendent

Signature:  Date: May 20, 2014

Name and Phone Number of Person/Department responsible for implementing a water conservation program:

Name: Keith Miertschin, Public Works Director Phone: (817) 514-5837

UTILITY DATA

I. CUSTOMER DATA

A. Population and Service Area Data

1. Please attach a copy of your Certificate of Convenience and Necessity (CCN) from the TCEQ
2. Service area size (square miles): 4.5
3. Current population of service area: 24,044
4. Current population served by utility:

a: water	<u>24,044</u>
b: wastewater	<u>24,044</u>

5. Population served by water utility for the previous five years:

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

<u>Year</u>	<u>Population</u>	<u>Year</u>	<u>Population</u>
<u>2009</u>	<u>24,330</u>	<u>2020</u>	<u>24,632</u>
<u>2010</u>	<u>23,555</u>	<u>2030</u>	<u>25,596</u>
<u>2011</u>	<u>23,792</u>	<u>2040</u>	<u>26,365</u>
<u>2012</u>	<u>24,044</u>	<u>2050</u>	<u>26,979</u>
<u>2013</u>	<u>24,044</u>	<u>2060</u>	<u>27,468</u>

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

Current populations were taken from the North Central Texas Council of Governments. Projected populations were taken from the Region C Water Planning Group, and the U.S. Census Bureau.

B. Active Connections

1. Current number of active connections by user type. If not a separate classification, check whether multi-family service is counted as Residential X or Commercial

<u>Treatedwater users:</u>	<u>Metered</u>	<u>Not-metered</u>	<u>Total</u>
Residential-Single-Family	<u>7,646</u>	<u>1</u>	<u>7,646</u>
Residential-Multi-Family	<u>212</u>	<u>0</u>	<u>212</u>
Commercial	<u>285</u>	<u>0</u>	<u>285</u>
Industrial	<u>0</u>	<u>0</u>	<u>0</u>
Public	<u>32</u>	<u>0</u>	<u>32</u>
Other	<u>29</u>	<u>0</u>	<u>29</u>

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

Year	<u>2011</u>	<u>2012</u>	<u>2013</u>
Residential-Single-Family	<u>0</u>	<u>0</u>	<u>11</u>
Residential-Multi-Family	<u>0</u>	<u>0</u>	<u>0</u>
Commercial	<u>1</u>	<u>0</u>	<u>5</u>
Industrial	<u>0</u>	<u>0</u>	<u>0</u>
Public	<u>0</u>	<u>0</u>	<u>0</u>
Other	<u>0</u>	<u>0</u>	<u>0</u>

C. High Volume Customers

List annual water use for the five highest volume retail and wholesale customers (Please indicate if treated or raw water delivery.)

	<u>Customer</u> <u>(1,000gal./yr.)</u>	<u>Use</u>	<u>Indicate</u> <u>Treated or Raw</u>
(1)	<u>WesternRimProp.</u>	<u>2,557,130</u>	<u>Treated</u>
(2)	<u>DaybreakVenture</u>	<u>1,221,780</u>	<u>Treated</u>
(3)	<u>Kwik KarWash</u>	<u>387,530</u>	<u>Treated</u>
(4)	<u>Denton Hwy</u> <u>Laundromat</u>	<u>354,510</u>	<u>Treated</u>
(5)	<u>PeiWeiAsianDiner</u>	<u>269,940</u>	<u>Treated</u>

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 X

<u>Year</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
January	<u>73,609,800</u>	<u>65,980,600</u>	<u>49,195,600</u>	<u>47,056,400</u>	<u>38,282,100</u>
February	<u>57,408,600</u>	<u>79,106,082</u>	<u>54,363,300</u>	<u>46,776,90</u>	<u>50,012,900</u>
March	<u>65,556,700</u>	<u>57,123,200</u>	<u>68,136,000</u>	<u>58,076,400</u>	<u>65,596,100</u>
April	<u>67,922,800</u>	<u>69,385,300</u>	<u>74,913,200</u>	<u>59,466,200</u>	<u>62,363,900</u>
May	<u>92,688,600</u>	<u>101,748,200</u>	<u>65,333,800</u>	<u>86,169,100</u>	<u>63,606,200</u>
June	<u>101,582,100</u>	<u>106,016,200</u>	<u>100,398,200</u>	<u>77,032,200</u>	<u>85,280,200</u>
July	<u>107,077,900</u>	<u>105,859,000</u>	<u>129,964,200</u>	<u>129,058,300</u>	<u>97,643,200</u>
August	<u>109,674,300</u>	<u>106,882,300</u>	<u>133,445,800</u>	<u>102,094,200</u>	<u>99,258,600</u>
September	<u>92,689,800</u>	<u>71,140,300</u>	<u>85,148,800</u>	<u>105,305,400</u>	<u>83,339,700</u>
October	<u>76,507,300</u>	<u>82,797,000</u>	<u>79,499,900</u>	<u>80,014,900</u>	<u>70,817,200</u>
November	<u>63,541,900</u>	<u>100,073,400</u>	<u>60,516,400</u>	<u>59,394,100</u>	<u>60,842,200</u>
December	<u>45,235,800</u>	<u>78,075,600</u>	<u>40,983,500</u>	<u>55,133,200</u>	<u>52,971,000</u>
Total	953,495,600	1,024,187,182	941,898,700	905,577,300	830,013,300

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

Master meters at points of entry and water sales.

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

<u>Year</u>	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Wholesale</u>	<u>Other</u>	<u>Total Sold</u>
<u>2009</u>	<u>609,543,357</u>	<u>134,640,052</u>	<u>N/A</u>	<u>N/A</u>	<u>18,552,181</u>	<u>762,735,590</u>
<u>2010</u>	<u>621,205,950</u>	<u>143,015,588</u>	<u>N/A</u>	<u>N/A</u>	<u>36,172,091</u>	<u>800,393,629</u>
<u>2011</u>	<u>676,745,138</u>	<u>148,013,021</u>	<u>N/A</u>	<u>N/A</u>	<u>49,386,885</u>	<u>874,145,044</u>
<u>2012</u>	<u>604,323,502</u>	<u>141,728,947</u>	<u>N/A</u>	<u>N/A</u>	<u>40,880,335</u>	<u>786,942,784</u>
<u>2013</u>	<u>572,192,173</u>	<u>129,506,110</u>	<u>N/A</u>	<u>N/A</u>	<u>20,418,746</u>	<u>722,117,029</u>

3. List previous five years records for water loss:

<u>Year</u>	<u>Amount(gal.)</u>
<u>2009</u>	<u>181,506,642</u>
<u>2010</u>	<u>223,122,993</u>
<u>2011</u>	<u>65,718,826</u>
<u>2012</u>	<u>112,501,479</u>
<u>2013</u>	<u>81,392,605</u>

4. List previous five years records for annual peak-to-average daily use ratio:

<u>Year</u>	<u>AverageMGD</u>	<u>PeakMG</u>	<u>Ratio</u>
<u>2009</u>	<u>2.569</u>	<u>3.857</u>	<u>1.50</u>
<u>2010</u>	<u>2.693</u>	<u>4.099</u>	<u>1.52</u>
<u>2011</u>	<u>2.320</u>	<u>3.856</u>	<u>1.66</u>
<u>2012</u>	<u>2.378</u>	<u>3.731</u>	<u>1.56</u>
<u>2013</u>	<u>2.392</u>	<u>3.655</u>	<u>1.52</u>

5. Total per capita water use for previous five years:

<u>Year</u>	<u>Population</u>	<u>Total Diverted or (1,000gal.)Sales</u>	<u>Per Capita (gpcd}</u>
<u>2009</u>	<u>24,330</u>	<u>953,495,600</u>	<u>107</u>
<u>2010</u>	<u>23,555</u>	<u>1,024,187,182</u>	<u>119</u>
<u>2011</u>	<u>23,792</u>	<u>941,898,700</u>	<u>108</u>
<u>2012</u>	<u>24,044</u>	<u>905,577,300</u>	<u>103</u>
<u>2013</u>	<u>24,044</u>	<u>830,013,300</u>	<u>95</u>

6. Seasonal water use for the previous five years (in gallons per person per day):

<u>Year</u>	<u>Population</u>	<u>Base Per CapitaUse</u>	<u>Summer Per CapitaUse</u>
<u>2009</u>	<u>24,330</u>	<u>95</u>	<u>142</u>
<u>2010</u>	<u>23,555</u>	<u>109</u>	<u>147</u>
<u>2011</u>	<u>23,792</u>	<u>89</u>	<u>166</u>
<u>2012</u>	<u>24,044</u>	<u>91</u>	<u>139</u>
<u>2013</u>	<u>24,044</u>	<u>83</u>	<u>128</u>

B. Projected Water Demands

Project water supply requirements for at least the next ten years using population trends, historical water use, and economic growth, etc. Indicate sources of data and how projected water demands were determined.

The City of Watauga does not expect a large increase in water demand in the near future. The city is land locked and there is very little room for residential or commercial growth. In March 2008, the city passed Ordinance #1368 restricting customers to no watering between the hours of 10:00 a.m. and 6:00 p.m. year round. In December 2008, the city council passed Ordinance #1397 with restrictions for irrigation installation and operation. Ordinance number 1397 states that all irrigation systems shall be designed, installed, maintained, altered, repaired, serviced and operated in a manner that will promote water conservation.

III. WATER SUPPLY SYSTEM

A. Water Supply Sources

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

	<u>Source</u>	<u>Amount Available</u>
Surface Water:	North Richland Hills	17 MGD
Groundwater:	N/A	MGD
Contracts:	N/A	MGD
Other:	N/A	MGD

B. Treatment and Distribution System

- Design daily capacity of system: 2.5 MGD
- Storage Capacity: Elevated 2 MGD, Ground 2 MGD
- If surface water, do you recycle filter backwash to the head of the plant?
Yes n/a No n/a If yes, approximately n/a MGD.
- Please describe the water system. Include the number of treatment plants, wells, and storage tanks. If possible, include a sketch of the system layout.

The City of Watauga's water system receives purchased water from North Richland Hills supplied by the City of Fort Worth and the Trinity River Authority. Watauga has a distribution system, a two (2) million gallon elevated storage facility and one two (2) million gallon ground storage facility. The ground storage facility is jointly used with North Richland Hills.

IV. WASTEWATER UTILITY SYSTEM

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s): n/a MGD
2. Is treated effluent used for irrigation on-site n/a off-site n/a, plant wash down n/a, or chlorination/dechlorination n/a?

If yes, approximately n/a gallons per month. Could this be substituted for potable water now being used in these areas n/a?

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 locates the plant(s) and discharge points or disposal sites. The City of Watauga does not have a wastewater treatment plant. Watauga's wastewater is treated by The City of Fort Worth. The numbers in B were taken from billing invoices from Fort Worth.

B. Wastewater Data for Service Area

1. N/A

Definitions of Utility Profile Terms

1. **Residential** sales should include water sold to residential (Single and Multi-Family) class customers only.
Industrial sales should include water sold to manufacturing and other heavy industry.
Commercial sales should include water sold to all retail businesses, offices, hospitals, etc.
Wholesale sales should include water sold to another utility for a resale to the public for human consumption.
2. **Water Loss** is the difference between water a utility purchases or produces and the amount of water that it can account for in sales and other known uses for a given period. 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.
3. The **peak-day to average-day ratio** is calculated by dividing the maximum daily pumpage (in million gallons per day) by the average daily pumpage. Average daily pumpage is the total pumpage for the year (as reported in Section IIAI, p. 4) divided by 365 and expressed in million gallons per day.
4. **Total use in gallons per capita per day** is defined as 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, then dividing by 365. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculation gallons per capita per day for targets and goals developed for the water conservation plan. Total water use is calculated by subtracting the wholesale sales from the total water diverted or treated (as reported in Section IIAI).
5. **Seasonal water use** is the difference between base (winter) daily per capita use and summer daily per capita use. To calculate the **base daily per capita use**, average the monthly diversions for December, January, and February, and divide this average by 30. Then divide this figure by the population. To calculate the **summer daily per capita use**, use the months of June, July, and August.

APPENDIX D

LETTERS TO WHOLESALE CUSTOMERS:
CITY OF FORT WORTH
CITY OF WATAUGA
TRINITY RIVER AUTHORITY
THE TEXAS WATER DEVELOPMENT BOARD
THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

May 19, 2014

City of Fort Worth
Frank Crumb, P.E.
1000 Throckmorton
Fort Worth, TX 76102

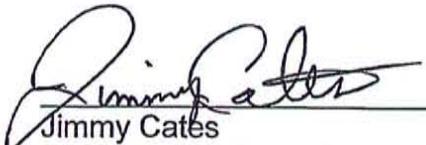
RE: City of North Richland Hills' Water Conservation Plan

Dear Mr. Crumb:

Please find enclosed The City of North Richland Hills' Water Conservation Plan. As you are aware, this plan is required by TCEQ to meet the minimum requirements provided in Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.20. In addition, as a wholesale customer of the City of Fort Worth, we have reviewed the City of Fort Worth's plan and believe our plan reflects the goals and criteria as stated in Fort Worth's plan.

Please feel free to contact me at 817-427-6464 if you require any additional information regarding this matter

Respectfully,


Jimmy Cates
Public Works Operations Manager

Enclosure

JC/sh/pwl2014-019u

May 19, 2014

City of Watauga
Greg Vick, City Manager
7105 Whitley Road
Watauga, TX 76148

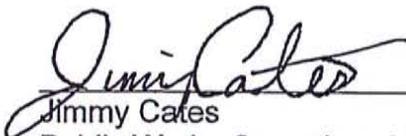
RE: City of North Richland Hills' Water Conservation Plan

Dear Mr. Vick:

Please find enclosed The City of North Richland Hills' Water Conservation Plan. As you are aware, the Texas Commission on Environmental Quality (TCEQ) is requiring all municipalities with a population of 5,000 or greater, to submit these documents. As the City of North Richland Hills' wholesale customer, the City of Watauga is required to implement a plan consistent with that developed by the City of North Richland Hills. A draft copy of the proposed plan was submitted to Mr. Brandon Dupree as reference material on May 16, 2014.

Please feel free to contact me at 817-427-6464 if you need any additional information regarding this matter

Respectfully,


Jimmy Cates
Public Works Operations Manager

Enclosure

JC/sh/pwl2014-020u

NRH
CITY OF NORTH RICHLAND HILLS

Public Works / Utilities

May 19, 2014

Trinity River Authority
Patricia Cleveland, Manager of Operations
P.O. Box 240
Arlington, TX 76004-0240

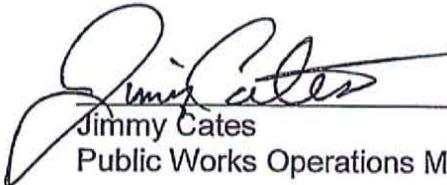
RE: City of North Richland Hills' Water Conservation Plan

Dear Ms. Cleveland:

Please find enclosed The City of North Richland Hills' Water Conservation Plan. As you are aware, this plan is required by TCEQ to meet the minimum requirements provided in Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.20. In addition, as a wholesale customer of the Trinity River Authority, we have reviewed the Trinity River Authority's plan and believe our plan reflects the goals and criteria as stated in the Trinity River Authority's plan.

Please feel free to contact me at 817-427-6464 if you require any additional information regarding this matter

Respectfully,


Jimmy Cates
Public Works Operations Manager

Enclosure

JC/sh/pwl2014-021u

May 19, 2014

Texas Water Development Board
Ethan Ham
P.O. Box 13231
Austin, TX 78711

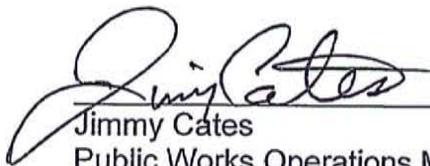
RE: City of North Richland Hills' Water Conservation Plan

Dear Mr. Ham:

Please find enclosed The City of North Richland Hills' Water Conservation Plan. As you are aware, this plan is required by TCEQ to meet the minimum requirements provided in Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.20. In addition, as a wholesale customer of the City of Fort Worth and the Trinity River Authority, we have reviewed their plans and believe our plan reflects the goals and criteria as stated in their plans.

Please feel free to contact me at 817-427-6464 if you require any additional information regarding this matter

Respectfully,



Jimmy Cates
Public Works Operations Manager

Enclosure

JC/sh/pwl2014-022u

May 19, 2014

Texas Commission on Environmental Quality
Kristin Wang-MC 160
P.O. Box 13087
Austin, TX 78711-3087

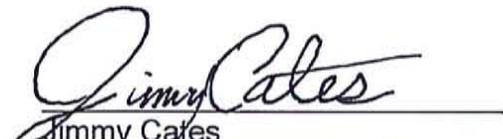
RE: City of North Richland Hills' Water Conservation Plan

Dear Ms. Wang:

Please find enclosed The City of North Richland Hills' Water Conservation Plan. As you are aware, this plan is required by TCEQ to meet the minimum requirements provided in Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.20. In addition, as a wholesale customer of the City of Fort Worth and the Trinity River Authority, we have reviewed their plans and believe our plan reflects the goals and criteria as stated in their plans.

Please feel free to contact me at 817-427-6464 if you need any additional information regarding this matter

Respectfully,


Jimmy Cates
Public Works Operations Manager

Enclosure

JC/sh/pwl2014-023u

APPENDIX E
CITY OF NORTH RICHLAND HILLS' ORDINANCE
ADOPTING WATER CONSERVATION PLAN

ORDINANCE NO. 3309

AN ORDINANCE AMENDING SECTION 78-61 OF THE NORTH RICHLAND HILLS CODE OF ORDINANCES TO REVISE THE WATER RATIONING SCHEDULE TO REFLECT NEW WATER RATIONING PLANS; ADOPTING A 2014 WATER CONSERVATION PLAN AND A 2014 DROUGHT CONTINGENCY AND EMERGENCY WATER MANAGEMENT PLAN PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY FOR VIOLATIONS; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council finds that conservation of water and protection of water supplies is in the best interest of the citizens of the City; and,

WHEREAS, water supply lakes rely on rainfall for replenishment and rainfall can vary significantly from year to year; and,

WHEREAS, the occurrence of droughts cannot be predicted as to when one will begin or end and emergency situations can occur at any time as a result of incidents such as pipeline failures, power outages and pump failures; and,

WHEREAS, the Texas Commission on Environmental Quality has mandated the adoption of new Water Conservation and Drought Contingency and Emergency Water Management Plans; **NOW THEREFORE:**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTH RICHLAND HILLS, TEXAS:

Section 1. That Sections 78-61, 78-62 and 78-63 of the North Richland Hills Code of Ordinances be amended to read as follows:

"Sec. 78-61. Lawn and Landscape Irrigation Restrictions.

- (a) Lawns and landscaping may be watered on any day, at any time, by handheld hose, drip irrigation, a soaker hose or tree bubbler. (The intent of this measure is to allow for the protection of structural foundations, trees, and other high value landscape materials).

Except for hand watering, drip irrigation and the use of soaker hoses, a person may only irrigate, water, or cause or permit the irrigation or watering of any lawn or landscape, inclusive of structural foundations, trees, and other high value landscape materials, located on premises owned, leased, or managed by that person (i) on a day designated as an outdoor water use day for the property's address as shown below; and (ii) between the hours of 12 midnight to 10 a.m. and 6 p.m. to 11:59 p.m. on such day.

- (1) Residential addresses ending in an even number (0, 2, 4, 6 or 8) may water on Wednesdays and Saturdays.
 - (2) Residential addresses ending in an odd number (1, 3, 5, 7 or 9) may water on Thursdays and Sundays.
 - (3) All non-residential locations (apartment complexes, businesses, industries, parks, street and/or roadway medians, etc.) may water on Tuesdays and Fridays.
- (b) Except for hand watering, drip irrigation and the use of soaker hoses, a person commits an offense if that person irrigates, waters, or causes or permits the irrigation or watering of any lawn or landscape located on premises owned, leased, or managed by that person between the hours of 10:00 a.m. and 6:00 p.m.
- (c) Except for hand watering, drip irrigation and the use of soaker hoses, a person commits an offense if that person irrigates, waters, or causes or permits the irrigation or watering of any lawn or landscape located on premises owned, leased, or managed by that person on a day that is not designated as an outdoor water use for that property address as shown in subsection (a) above.
- (d) A person commits an offense if a person knowingly or recklessly irrigates, waters, or causes or permits the irrigation or watering of a lawn or landscape located on premises owned, leased or managed by the person in a manner that causes:
- (1) a substantial amount of water to fall upon impervious areas instead of a lawn or landscape, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area; or
 - (2) an irrigation system or other lawn or landscape watering device to operate during any form of precipitation.
- (e) A person commits an offense if, on premises owned, leased, or managed by that person, a person operates a lawn or landscape irrigation system or device that:
- (1) has any broken or missing sprinkler head; or
 - (2) has not been properly maintained in a manner that prevents the waste of water.
- (f) Affirmative Defenses
- (1) It shall be an affirmative defense to prosecution of an offense in section 78-161 that at the time such person irrigates, waters, or causes or

permits the irrigation or watering of any lawn or landscape, such activity was for the purpose of:

- (A) dust control of a sports field; or
 - (B) the maintenance, repair, or testing of an irrigation system.
- (2) The activity described in subsection f (1) (A) and (B) may only occur within a period of two (2) days no more than once every thirty (30) days. Any such activity requiring a longer period or greater frequency shall require a variance as provided by subsection (g).

(g) Variances

- (1) The public works operations manager or his designee may grant variances to the twice per week watering and irrigation restrictions and schedule, if one or more of the following conditions are met:
- (A) Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the Person requesting the variance;
 - (B) Compliance with the watering and irrigation restrictions and/or schedule cannot be accomplished due to technical or other limitations; or
 - (C) Alternative methods that achieve the same level of reduction in water use can be implemented.
- (2) The public works operations manager or his designee may grant variances to allow for establishment of hydromulch, grass sod, or grass seed for new lawns.
- (3) Variances shall be granted or denied at the discretion of the public works operations manager or his designee. All petitions for variances shall be in writing and shall include the following:
- (A) Name and address of the petitioner(s);
 - (B) Purpose of the water use;
 - (C) Specific provisions from which relief is requested;
 - (D) Detailed statement of the adverse effect of the provision from which relief is requested;

- (E) Description of the relief requested;
 - (F) Period of time for which the variance is sought;
 - (G) Alternative measures that will be taken to reduce water use; and
 - (H) Other pertinent information requested.
- (h) A person who irrigates, waters, or causes or permits the irrigation or watering by use of an alternative water source such as a well, reclaimed or reused water is exempt from prosecution if that person has:
- (1) Registered such alternative water source with the City;
 - (2) Provided sufficient proof to the public works director that the alternative water source is from a well, reclaimed or reused water and has allowed inspection by the water department director if deemed necessary; and
 - (3) Complied with the City's Backflow and Cross-connection Control Program and Division 2 of Chapter 78 of the Code of Ordinances.

Sec. 78-62. Water conservation plan adopted.

The City of North Richland Hills, Texas hereby adopts the 2014 water conservation plan attached hereto. The city commits to implement the requirements and procedures set forth in the adopted plan.

Sec. 78-63. Drought contingency and emergency water management plan.

- (a) *Plan adopted.* The city council hereby approves and adopts the drought contingency and emergency water management plan (the "plan") attached hereto, as if recited verbatim herein. The city commits to implement the requirements and procedures set forth in the adopted plan.
- (b) *Procedure, rules and regulations.* The city manager or his/her designee shall have the authority to enact and promulgate rules and regulations of the plan as necessary to protect the health and safety of the general public.
- (c) *Penalty for violations.* Any customer, as defined by Rule 288.2, Title 30, Chapter 288 Subchapter B, Texas Administrative Code, failing to comply with the provisions of the plan shall be deemed guilty of a misdemeanor involving health and safety and shall be subject to a fine not exceeding \$2,000.00 and/or discontinuance of water service by the city. Each day a customer fails to comply with the plan is a separate violation. The city may also seek injunctive or other civil relief for actual or threatened violations.

- (d) *Variances.* The city manager or his/her designee shall have the authority to grant temporary variances for water uses otherwise prohibited under the plan if it is determined that the failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation or fire protection for the public or the person requesting the variance."

Section 2. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable, and if any section, paragraph, sentence, clause, or phrase of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining sections, paragraphs, sentences, clauses, and phrases of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this Ordinance of any such unconstitutional section, paragraph, sentence, clause or phrase.

Section 3. The City Secretary is hereby directed to publish this ordinance or its caption and penalty in the official City newspaper as required by law.

Section 4. This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordered.

PASSED AND APPROVED on this 23rd day of June, 2014.



ATTEST:

Alicia Richardson
Alicia Richardson, City Secretary

CITY OF NORTH RICHLAND HILLS

By: *Oscar Trevino*
Oscar Trevino, Mayor

APPROVED AS TO FORM AND LEGALITY:

George A. Staples
George A. Staples, City Attorney

APPROVED AS TO CONTENT:

Mike Curtis
Mike Curtis, P.E., Managing Director

APPENDIX F

**CITY OF NORTH RICHLAND HILLS' LANDSCAPE
WATER MANAGEMENT ORDINANCE AND
AMENDMENT TO OUTSIDE WATERING ORDINANCE**

ORDINANCE NO. 2893

AN ORDINANCE AMENDING CHAPTER 78 "UTILITIES", ARTICLE II "WATER", DIVISION 2 "WATER CONSERVATION AND RATIONING" OF THE NORTH RICHLAND HILLS CODE OF ORDINANCES BY ADDING SECTIONS 78-65 TO BE ENTITLED "LAWN AND LANDSCAPE IRRIGATION RESTRICTIONS", SECTION 78-66 TO BE ENTITLED "RAIN SENSING DEVICES AND FREEZE SENSORS" AND SECTION 78-67 TO BE ENTITLED "EXCEPTIONS"; AMENDING SECTION 114.71(C) OF THE CODE OF ORDINANCES TO CONFORM TO THE OTHER AMENDMENTS HEREIN; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY FOR VIOLATIONS HEREOF; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of North Richland Hills, Texas (the "City") is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the City Council finds that conservation of water and protection of water supplies is necessary to protect public health and sanitation as well as to provide water for fire protection; and

WHEREAS, the City Council having previously adopted a water conservation plan incorporated into the Code of Ordinances; and

WHEREAS, securing future water supplies will require proving to state permitted agencies that existing water supplies are being used efficiently.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTH RICHLAND HILLS, TEXAS:

SECTION 1. That Chapter 78 "Utilities", Article II "Water", Division 2 "Water Conservation and Rationing" of the Code of Ordinances be and is hereby amended by adding Sections 78-65 through 78-67 which shall read as follows:

Sec. 78-65. Lawn and landscape irrigation restrictions

- (a) Except for hand watering and the use of soaker hoses, a person commits an offense if a person irrigates, waters, or causes or permits the irrigation of watering of any lawn or landscape located on premises owned, leased, or managed by that person between the hours of 10:00 a.m. and 6:00 p.m. during the period from June 1 through September 30 of any year.
- (b) A person commits an offense if he knowingly or recklessly irrigates, waters, or causes or permits the irrigation or watering of a lawn or landscape located on premises owned, leased or managed by the person in a manner that causes:
 - (1) a substantial amount of water to fall upon impervious areas instead of a lawn or landscape, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area; or
 - (2) an irrigation system or other lawn or landscape watering device to operate during any form of precipitation.
- (c) A person commits an offense if, on premises owned, leased, or managed by that person, he operates a lawn or landscape irrigation system or device that:
 - (1) has any broken or missing sprinkler head; or
 - (2) has not been properly maintained in a manner that prevents the waste of water.

Sec. 78-66. Rain sensing devices and freeze sensors.

- (a) All irrigation systems installed on or after October 25, 1999 with the exception of those associated with agricultural and/or single family residential uses must be equipped with rain and freeze sensors. (See Section 114-74)
- (b) Any agricultural and/or single family residential irrigation system installed within the City on or after August 1, 2006 must be equipped with rain and freeze sensors.
- (c) The potable water supply to lawn irrigation system shall be protected against backflow in accordance with the City's Backflow and Cross-connection Control Program adopted by Article VII of Chapter 78 of the Code of Ordinances.

- (d) It shall be unlawful for any person to knowingly or recklessly install, operate, or cause, or permit the installation of or the operation of, an irrigation system in violation of subsections 78-66 (a) through (d) on premises owned, leased, or managed by that person.

Sec.78-67. Exceptions.

- (a) The Director of Public Works or his designee may grant exceptions from the provisions of Sections 78-65 or 78-66 to persons demonstrating extreme hardship and/or need as determined by the Director of Public Works or his designee and only under the following conditions:
 - (1) The applicant must sign a compliance agreement on forms provided by the Public Works Department, agreeing to irrigate or water a lawn or landscape only in the amount and manner permitted by the exception.
 - (2) Granting of an exception must not cause an immediate significant reduction in the City's water supply.

Examples of hardships that will be considered shall include such things but not be limited to such items as:

New landscaping and/or lawns that can not be watered during the specified times

Installation of new irrigation systems

Repair and/or adjustments to an existing irrigation system

Any hardship related to the health, safety and welfare of the person making the request

Any other request determined to be a hardship as determined by the Public Works Director or his Designee

- (b) The Director of Public Works or his designee may revoke an exception granted when determined that:
 - (1) the conditions of subsection (a) are not being met or are no longer applicable;
 - (2) the terms of the compliance agreement are being violated; or
 - (3) the health, safety or welfare of other persons requires revocation."

SECTION 2. That Section 114-71(c)(1) Landscaping Regulations general criteria of the Code of Ordinances be and is hereby amended to read as follows:

Sec. 114-71. Landscaping regulations

(c) General criteria.

"(1) The standards contained in this section are considered minimum standards and shall apply to all zoning districts. Agricultural uses and single-family residences and their accessory buildings shall be exempt from the requirements of this Article except as provided in subsection (c)(2) of this section and Section 78-66 of this Code."

SECTION 3. This Ordinance shall be cumulative of all provisions of the Code of Ordinances of the City of North Richland Hills, and other applicable City ordinances, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the applicability of the conflicting provisions of such ordinances are hereby repealed to the extent of such conflict.

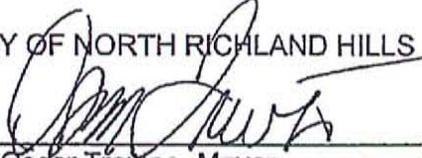
SECTION 4. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable, and if any section, paragraph, sentence, clause, or phrase of this Ordinance shall be declared unconstitutional by the valid judgment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

SECTION 5. Any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this Ordinance shall be fined not more than Two Thousand Dollars (\$2000.00) for each offense. Each day that a violation is permitted to exist shall constitute a separate offense.

SECTION 6. The City Secretary is hereby directed to publish this ordinance or its caption and penalty in the official City newspaper one time within ten (10) days after final passage hereof.

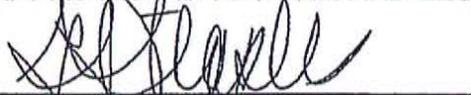
SECTION 7. This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordered.

PASSED AND APPROVED on this 10th day of July, 2006.

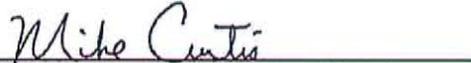
CITY OF NORTH RICHLAND HILLS
By: 
Oscar Trevino, Mayor


ATTEST: 
Patricia Hutson, City Secretary

APPROVED AS TO FORM AND LEGALITY:


George A. Staples, City Attorney

APPROVED AS TO CONTENT:


Mike Curtis, Public Works Director

ORDINANCE NO. 3009

AN ORDINANCE AMENDING SECTION 78-65 OF THE NORTH RICHLAND HILLS CODE OF ORDINANCES TO EXTEND OUTSIDE WATERING RESTRICTIONS TO ALL MONTHS OF THE YEAR; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY FOR VIOLATIONS HEREOF; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of North Richland Hills, Texas (the "City") is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the City Council finds that conservation of water and protection of water supplies is necessary to protect public health and sanitation as well as to provide water for fire protection; and

WHEREAS, the City Council having previously adopted a water conservation plan incorporated into the Code of Ordinances; and

WHEREAS, securing future water supplies will require proving to state permitted agencies that existing water supplies are being used efficiently; and,

WHEREAS, THE City has been requested by its supplier of potable water to extend the restrictions on hours for outside watering to all months of the year in order to conserve water;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTH RICHLAND HILLS, TEXAS:

Section 1. That Section 78-65(a) of the North Richland Hills Code of Ordinances be amended to read as follows:

"Sec. 78-65. Lawn and landscape irrigation restrictions

- (a) Except for hand watering and the use of soaker hoses, a person commits an offense if a person irrigates, waters, or causes or permits the irrigation of watering of any lawn or landscape located on premises owned, leased, or managed by that person between the hours of 10:00 a.m. and 6:00 p.m.

..."

- Section 2. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable, and if any section, paragraph, sentence, clause, or phrase of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining sections, paragraphs, sentences, clauses, and phrases of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this Ordinance of any such unconstitutional section, paragraph, sentence, clause or phrase.
- Section 3. Any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this Ordinance shall be fined not more than Two Thousand Dollars (\$2000.00) for each offense. Each day that a violation is permitted to exist shall constitute a separate offense.
- Section 4. The City Secretary is hereby directed to publish this ordinance or its caption and penalty in the official City newspaper one time within ten (10) days after final passage hereof.
- Section 5. This Ordinance shall be in full force and effect beginning October 1, 2008 and after its passage and publication as required by law and it is so ordered.

PASSED AND APPROVED on this 26th day of August, 2008.



Patricia Hutson
Patricia Hutson, City Secretary

CITY OF NORTH RICHLAND HILLS

By: Oscar Trevino
Oscar Trevino, Mayor

APPROVED AS TO FORM AND LEGALITY:

George A. Staples
George A. Staples, City Attorney

APPROVED AS TO CONTENT:

Mike Curtis
Mike Curtis, P.E., Public Works Director