City of Lucas

2024 Water Conservation and Water Resource and Emergency Management Plan

Water Resource Emergency Management Plan

DEFINITIONS

AQUATIC LIFE means a vertebrate organism dependent upon an aquatic environment to sustain its life.

ATHLETIC FIELD means a public sports competition field, the essential feature of which is turf grass, used primarily for organized sports practice, competition or exhibition events for schools, professional sports and league play sanctioned by the utility providing retail water supply.

BEST MANAGEMENT PRACTICES (BMPs) are voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

COMMERCIAL VEHICLE WASH FACILITY means a permanently located business that washes vehicles or other mobile equipment with water or water-based products, including but not limited to self-service car washes, full-service car washes, roll-over/in-bay style car washes, and facilities managing vehicle fleets or vehicle inventory.

COMMERCIAL FACILITY means business or industrial buildings and the associated landscaping, but does not include the fairways, greens, or tees of a golf course.

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

COOL SEASON GRASSES are varieties of turf grass that grow best in cool climates primarily in northern and central regions of the U.S. Cool season grasses include but are not limited to perennial and annual rye grass, Kentucky blue grass and fescues.

CUSTOMERS include those entities to whom NTMWD provides wholesale water that are not member cities of NTMWD.

DESIGNATED OUTDOOR WATER USE DAY means a day prescribed by a rule on which a person is permitted to irrigate outdoors.

DRIP IRRIGATION is a type of micro-irrigation system that operates at low pressure and delivers water in slow, small drips to individual plants or groups of plants through a network of plastic conduits and emitters; also called trickle irrigation.

DROUGHT, for the purposes of this report, means an extended period of time when an area receives insufficient amounts of rainfall to replenish the water supply, causing water supply sources (in this case reservoirs) to be depleted.

PUBLIC WATER SUPPLIER is an individual or entity that supplies water to the public for human consumption.

REGIONAL WATER PLANNING GROUP is a group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

REGULATED IRRIGATION PROPERTY means any property of a designated customer class (i.e., commercial) that uses one million gallons of water or more for irrigation purposes in a single calendar year or is greater than one acre in size.

RESIDENTIAL GALLONS PER CAPITA PER DAY (RESIDENTIAL GPCD) means the total gallons sold for retail residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

RETAIL CUSTOMERS include those customers to whom the utility provides retail water from a water meter.

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.

SOAKER HOSE means a perforated or permeable garden-type hose or pipe that is laid above ground that provides irrigation at a slow and constant rate.

SPRINKLER/SPRAY IRRIGATION is the method of applying water in a controlled manner that is similar to rainfall. The water is distributed through a network that may consist of pumps, valves, pipes, and sprinklers.

SPRINKLER means an above-ground water distribution device that may be attached to a garden hose.

RECREATIONAL/SWIMMING POOL is defined as a body of water that involves contact recreation. This includes activities that are presumed to involve a significant risk of ingestion of water (e.g. wading by children, swimming, water skiing, diving, tubing, surfing, etc.)

TOTAL GALLONS PER CAPITA PER DAY (TOTAL GPCD) means the total amount of water diverted and/or pumped for potable use less wholesale sales divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in TAC 288.1 shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

ABBREVIATIONS

Ac-Ft/Yr ..... Acre-Feet per Year
BMP ..... Best Management Practices
DWU ..... Dallas Water Utilities
E&O ..... Education and Outreach
ED ..... Executive Director
EPA ..... Environmental Protection Agency
ET ..... Evapotranspiration
FNI ..... Freese and Nichols, Inc.
gpf ..... Gallons per Flush
gpm ..... Gallons per Minute
LAMP ..... Linear Asset Management Plan
LRWSP ..... Long Range Water Supply Plan
FWSD ..... Fresh Water Supply District
GPCD ..... Gallons per Capita per Day
ICIM ..... Industrial, Commercial, Institutional and Multifamily
MGD ..... Million Gallons per Day
MUD ..... Municipal Utility District
NCTCOG ..... North Central Texas Council of Governments
NTMWD ..... North Texas Municipal Water District
SUD ..... Special Utility District
TCEQ ..... Texas Commission on Environmental Quality
TRWD ..... Tarrant Regional Water District
TWDB ..... Texas Water Development Board
UTRWD ..... Upper Trinity Regional Water District
UD ..... Utility District
WCAC ..... Water Conservation Advisory Council
WCP ..... Water Conservation Plan
WREMP ..... Water Resource and Emergency Management Plan
WSC ..... Water Supply Corporation
WENNT ..... Water Efficiency Network of North Texas
WTP ..... Water Treatment Plant
WWTP ..... Wastewater Treatment Plant

1.00 INTRODUCTION

The City of Lucas is a Customer of the North Texas Municipal Water District (NTMWD). This Plan was developed following TCEQ guidelines and requirements governing the development of water conservation plans.

The goal of the Water Conservation Plan is to serve as good stewards of water resources by preserving water supplies for essential uses and the protection of public health. The objectives to achieve this goal are as follows:

- To reduce the loss and waste of water.
- To improve efficiency in both indoor and outdoor water use.
- To maximize the level of recycling and reuse.
- To protect and preserve environmental resources.
- To extend the life of current water supplies.
- To raise public awareness of water conservation and encourage responsible personal behavior through public education programs.

1.01 MINIMUM REGULATORY REQUIREMENTS CHECKLIST

A water conservation plan is defined as "[a] strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document". Recognizing the need for efficient use of existing water supplies, the TCEQ has developed guidelines and requirements governing the development of water conservation and drought contingency plans. The minimum TCEQ requirements and where they are addressed within this document are included in **Appendix B**.

1.02 ADDITIONAL REQUIREMENTS AND GUIDANCE

In addition to TCEQ rules regarding water conservation, this Plan also incorporates both minimum requirements as required from NTMWD and elements from several conservation initiatives.

- **2024 NTMWD Water Conservation Plan** – Member Cities and Customers of the NTMWD are required to implement water conservation strategies as designated in the NTMWD Water Conservation Plan. These strategies represent minimum measures to be implemented and enforced to promote water conservation and are to remain in effect on a permanent basis.

Table 1: Five- and 10-Year Per Capita Water Use Goals

	Historic 5-Year Average	Baseline	5-Year Goal 2029	10-Year Goal 2034
Total (GPCD)[1]	197	259	154	150
Residential (GPCD)[2]	170	222	145	140
ICIM (GPCD)[3]	7	10	5	5
Water Loss (GPCD)[4]	16	25	14	13
Water Loss (Percentage)[5]	8	10	11	10

[1]Total GPCD = (Total Gallons in System / Permanent Population) / 365
[2]Residential GPCD = (Gallons Used for Residential Use / Residential Population) / 365
[3]ICIM GPCD = (Gallons Used for Industrial, Commercial, Institutional and Multi-family Use / Permanent Population) / 365
[4]Water Loss GPCD = (Total Water Loss / Permanent Population) / 365
[5]Water Loss Percentage = (Total Water Loss / Total Gallons in System) x 100; or (Water Loss GPCD / Total GPCD) x 100

3.02 METHOD FOR TRACKING

NTMWD requires Member Cities and Customers to complete annual conservation reports by March 31 of the following year and submit them to NTMWD. A copy of the form is included as **Appendix D**.

The completion of this Annual Water Conservation Report allows the City of Lucas to track the effectiveness of its water conservation programs over time and reassess those programs that are not providing water savings, ensuring maximum water use efficiency and greater levels of conservation.

4.00 METERING, RECORDS AND WATER LOSS CONTROL

4.01 METERING PROGRAM

One of the key elements in water conservation is careful tracking of water use and control of losses. 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.

ACCURATE METERING OF TREATED WATER DELIVERIES FROM NTMWD

Accurate metering of water diversions and deliveries, detection, and repair of leaks in the raw water transmission and potable water distribution systems and regular monitoring of nonrevenue water are important elements of NTMWD's program to control losses. Water deliveries from NTMWD are metered by NTMWD using meters with accuracy of ±2%. These meters are calibrated on an annual basis by NTMWD to maintain the required accuracy.

help identify leaks or drops in pressure due to damaged infrastructure. Neptune Smart Meters flag continuous usage and tell you how many days the continuous use has occurred. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

5.00 CONTRACT REQUIREMENTS FOR WHOLESALE CUSTOMERS

Every water supply contract entered into or renewed after official adoption of this water conservation plan, including any contract extension, will include a requirement that each wholesale customer must develop and implement a water conservation plan and water conservation measures. If the customer intends to resell the water, then the contract between the initial supplier and customer must specify 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 Title 30 TAC Chapter 388. Note: NTMWD refers to their Drought Contingency Plan (DCP) as the Water Resources Emergency Management Plan (WREMP) and should be considered synonymous with a DCP.

6.00 RESERVOIR SYSTEM OPERATIONS PLAN

The City of Lucas purchases treated water from NTMWD and does not have surface water supplies for which to implement a reservoir system operations plan. NTMWD operates multiple sources of water supply as a system. The operation of the reservoir system is intended to optimize the use of the District's sources (within the constraints of existing water rights) while minimizing energy use cost for pumping, maintaining water quality, minimizing potential impacts on recreational users of the reservoirs and fish and wildlife.

7.00 CONSERVATION PLAN ADOPTION AND ENFORCEMENT

7.01 MEANS OF IMPLEMENTATION AND ENFORCEMENT

Staff will implement the Plan in accordance with adoption of the Plan. **Appendix F** contains a copy of the ordinance adopted regarding this Plan. The document designates responsible officials to implement and enforce the Plan.

The City of Lucas will enforce the requirements of this plan through a variety of mechanisms based on the nature of the regulated activity or service:

- No new development or construction shall be approved if it fails to meet the requirements of this plan and all adopted city codes and ordinances.
- Any connection not approved through the permitting or development process is considered illegal and will be disconnected if discovered.
- The City will disconnect water service to customers who fail to make payments.

providing ET-based irrigation recommendations in the state of Texas and provides the public with advanced information regarding outdoor irrigation needs, thereby reducing water use. Through a series of selections on the type of irrigation system a consumer has, a weekly email or text message is provided that will recommend how long (in minutes) that an irrigation system needs to run based on the past seven days of weather. This recommendation provides the actual amount of supplemental water that is required for a healthy lawn based on research of the Texas A&M Agrilife Extension Service and proven technologies.

- "Water4Otter" is a water conservation campaign for kids launched by NTMWD in 2014. It is based on the insight that most parents agree they would listen if their kids asked them to conserve water. The TWDB awarded the NTMWD a conservation grant to develop Water4Otter as a model program that could be used throughout the state. The 2023 program included 22 performances at 11 schools in eight different ISDs including stops at elementary schools in Wylie, Garland, Mesquite, Plano, Princeton, Richardson, and Royse City.
- "Love Lavon Lake" is a water conservation campaign designed to help North Texans know their primary water source. The campaign launched in 2018 with a call to action to, "Conserve your water source. Love Lavon Lake". The campaign was based on market research showing the more people know the source of their drinking water, the more likely they are to use it wisely and efficiently.
- NTMWD implemented the "#PledgetoPlantSmart" initiative that seeks to inspire positive change in water conservation by encouraging North Texas residents to do their part and plant smart by selecting native or adapted plants for their garden and landscaping.

NTMWD also participates in a regional outreach campaign called "Water is Awesome" partnering with the City of Dallas and Tarrant Regional Water District. NTMWD Member Cities and Customers have access to the campaign materials which include:

- In 2019, an additional tagline, "Keep Texas Water on Tap", was incorporated to promote the Water is Awesome brand and direct traffic to waterisawesome.com.
- In 2020, a "customer city toolkit" provided customizable resources allowing cities to incorporate their logos with the campaign brand for their website, social media, and print. Cities are encouraged to use campaign resources to advance conservation efforts.
- In 2021, the regional water providers collaborated to create the Regional Landscape Initiatives. This document was developed as a resource of best management practices for municipal staff to help reduce water waste and encourage long-term water conservation in the North Texas region. Information consists of the background,

Multifamily Program. The ICIM program provides NTMWD Member City and Customer staff with the knowledge and tools necessary to identify ICIM customers with high water usage. This program was created to categorize water use data to find outliers and identify areas to concentrate water conservation efforts. This program can help Member Cities and Customers' ICIM water customers develop targeted methods for increasing water efficiency as an alternative to a traditional voluntary approach for water consumption improvement.

- As part of the ICIM program, the District is currently engaging with the Member and Customer Cities to encourage their ICIM customers to participate in **Water Efficiency Opportunity Surveys**. These surveys encompass a building audit that recommends various water conservation measures that can be implemented to save both money and water. Items addressed include toilet retrofits, urinal retrofits, showerhead retrofits, lavatory retrofits, non-lavatory faucet retrofits, leak repair, water cooled ice machine retrofit, commercial disposer, food steam, cooling tower efficiency and irrigation system efficiency. As of June 2023, NTMWD has utilized the ICIM program to audit four buildings resulting in an estimated annual water savings of 87.4 million gallons.

- As part of its wastewater system, NTMWD has developed **Industrial Pretreatment Programs** for the cities of Allen, Forney, Frisco, McKinney, Mesquite, Murphy, Plano, Richardson, Rockwall, Terrell, and Wylie. The pretreatment programs developed by NTMWD are adopted and implemented by the cities, which are also responsible for enforcement of the programs. By reducing allowable volumes of specific pollutants and encouraging pretreatment of industrial wastes, this joint effort by NTMWD and the cities has improved water quality in the region's streams and reservoirs. NTMWD industrial pretreatment personnel are also available to assist cities on request in the review or design of systems to allow industrial recycling and reuse of wastewater. Such systems have reduced water use by some industries, while also reducing wastewater volumes and saving money for the industries.

- NTMWD encourages its Member Cities and Customers to develop and implement **Rebate and Bulk Purchasing Programs** that help the Member Cities and Customers achieve overall water savings. Further, NTMWD provides technical assistance to those Member Cities and Customers who wish to implement rebate and bulk purchasing programs.

PUBLIC EDUCATION PROGRAM

Water conservation signs are placed throughout the city. Information and online resource links for water conservation are available on the City of Lucas website. The City of Lucas will display watering restrictions on outdoor signs at City Hall and the Fire Station. Information is also made available at city special events.

WATER CONSERVATION PRICING

Each Member City and Customer must adopt an increasing block rate water structure that is intended to encourage water conservation and to discourage excessive use and waste of water.

The City of Lucas adopted the residential and commercial water rate structure in the Fee Schedule of the City of Lucas Code of Ordinances on February 16, 2023, and is as follows:

Residential Rates

§20.100 Water rates for all residential customers within city limits.

Effective date	3/1/23	10/1/23	10/1/24	10/1/25	10/1/26
5/8"	$25.04	$26.28	$27.52	$28.76	$30.00
1" meter	$39.87	$41.85	$43.82	$45.80	$47.77
1-1/2" meter	$45.49	$47.75	$50.00	$52.25	$54.50
2" meter	$93.03	$97.63	$102.24	$106.85	$111.45
Consumption charge					
2,001–3,000	$7.31	$7.67	$8.06	$8.46	$8.88
3,001–4,000	$7.31	$7.67	$8.06	$8.46	$8.88
4,001–5,000	$7.31	$7.67	$8.06	$8.46	$8.88
5,001–6,000	$7.77	$8.16	$8.57	$9.00	$9.45
6,001–7,000	$7.77	$8.16	$8.57	$9.00	$9.45
7,001–10,000	$7.77	$8.16	$8.57	$9.00	$9.45
10,001–11,000	$8.14	$8.55	$8.97	$9.42	$9.89
11,001–16,000	$8.14	$8.55	$8.97	$9.42	$9.89
16,001–20,000	$8.14	$8.55	$8.97	$9.42	$9.89
20,001–21,000	$8.14	$8.55	$8.97	$9.42	$9.89
21,001–25,000	$8.14	$8.55	$8.97	$9.42	$9.89
25,001–30,000	$8.14	$8.55	$8.97	$9.42	$9.89
30,001–50,000	$8.51	$8.93	$9.38	$9.85	$10.34
50,001–greater	$9.14	$9.59	$10.07	$10.58	$11.11

§20.300 Water rates for out-of-city residential.

Effective date	3/1/23	10/1/23	10/1/24	10/1/25	10/1/26
5/8 meter	$37.56	$39.42	$41.28	$43.14	$45.00
1" meter	$59.82	$62.78	$65.75	$68.71	$71.67
1-1/2" meter	$68.23	$71.61	$74.99	$78.37	$81.75

Effective date	3/1/23	10/1/23	10/1/24	10/1/25	10/1/26
7,001–10,000	$8.23	$8.77	$9.34	$9.95	$10.59
10,001–11,000	$8.61	$9.17	$9.77	$10.40	$11.08
11,001–16,000	$8.61	$9.17	$9.77	$10.40	$11.08
16,001–20,000	$8.61	$9.17	$9.77	$10.40	$11.08
20,001–21,000	$8.61	$9.17	$9.77	$10.40	$11.08
21,001–25,000	$8.61	$9.17	$9.77	$10.40	$11.08
25,001–30,000	$8.61	$9.17	$9.77	$10.40	$11.08
30,001–50,000	$8.99	$9.58	$10.20	$10.86	$11.57
50,001–100,000	$9.16	$9.76	$10.39	$11.07	$11.78
100,001–greater	$9.44	$10.05	$10.70	$11.40	$12.14

§20.400 Water rates for out-of-city commercial.

Effective date	3/1/23	10/1/18	10/1/19	10/1/20	10/1/21
Min. charge 0–2,000 gallons					
5/8 meter	$39.42	$41.37	$43.33	$45.28	$47.23
1" meter	$63.68	$66.83	$69.99	$73.14	$76.29
1-1/2" meter	$93.03	$97.64	$102.25	$106.85	$111.46
2" meter	$196.95	$206.71	$216.46	$226.21	$235.97
3" meter	$312.47	$327.95	$343.42	$358.90	$374.37
4" meter	$582.34	$611.18	$640.01	$668.85	$697.69
6" meter	$858.51	$901.03	$943.54	$986.06	$1,028.57
8" meter	$1,726.50	$1,811.99	$1,897.49	$1,982.99	$2,068.49
Consumption charge					
2,001–3,000	$12.71	$13.54	$14.42	$15.36	$16.35
3,001–4,000	$12.71	$13.54	$14.42	$15.36	$16.35
4,001–5,000	$12.71	$13.54	$14.42	$15.36	$16.35
5,001–6,000	$13.50	$14.38	$15.32	$16.31	$17.37
6,001–7,000	$13.50	$14.38	$15.32	$16.31	$17.37
7,001–10,000	$13.50	$14.38	$15.32	$16.31	$17.37
10,001–11,000	$14.13	$15.04	$16.02	$17.06	$18.17
11,001–16,000	$14.13	$15.04	$16.02	$17.06	$18.17
16,001–20,000	$14.13	$15.04	$16.02	$17.06	$18.17
20,001–21,000	$14.13	$15.04	$16.02	$17.06	$18.17
21,001–25,000	$14.13	$15.04	$16.02	$17.06	$18.17

- **Winter (November 1 – March 31)** – Spray irrigation with sprinklers or irrigation systems at each service address must be limited to no more than ***one day per week*** with education that less than once per week (or not at all) is usually adequate.

Additional irrigation may be provided by hand-held hose with shutoff nozzle, use of dedicated irrigation drip zones, and/or soaker hose provided no runoff occurs. Many North Texas horticulturists have endorsed twice-weekly watering as more than sufficient for landscapes in the region, even in the heat of summer.

The City of Lucas maintains a map of scheduled watering days based on location within the service areas of the water system. This map is available on the City of Lucas website.

TIME OF DAY WATERING SCHEDULE

NTMWD requires that during the summer months (April 1 – October 31) under normal conditions, spray irrigation with an irrigation system or sprinkler is only permitted on authorized watering days, before 10 a.m. or after 6 p.m. The primary purpose of this measure is to reduce wind drift and evaporation losses during the active growing season. The time-of-day watering schedule requirement increases watering efficiency by eliminating outdoor irrigation use when climatic factors negatively impact irrigation system efficiencies. Midday irrigation is not an optimal time to irrigate because evapotranspiration rates are higher, and plants are more susceptible to stress associated with factors such as higher temperatures and lower relative humidity.

IRRIGATION SYSTEM REQUIREMENTS FOR NEW AND COMMERCIAL SYSTEMS

In 2007, the 80th Texas Legislature passed House Bill 1656, Senate Bill 3, and House Bill 4 related to regulating irrigation systems and irrigators by adopting minimum standards and specifications for designing, installing, and operating irrigation systems. The Texas legislation required cities with a population over 20,000 to develop a landscape irrigation program that includes permitting, inspection, and enforcement of water conservation for new irrigation systems. NTMWD ***requires*** all Member Cities and Customers adhere to a minimum set of irrigation standards:

1) Require that all new irrigation systems be in compliance with state design and installation regulations (Texas Administrative Code Title 30, Chapter 344).

2) Require operational rain and freeze sensors and/or ET or Smart controllers on all new irrigation systems. Rain and freeze sensors and/or ET or Smart controllers must be properly maintained to function properly.

3) Require that irrigation systems be inspected at the same time as initial backflow preventer inspection.

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Under Texas Water Code Chapter 11 and Title 30 Texas Administrative Code Chapter 288, Retail, Irrigation and Wholesale Public Water Suppliers are required to develop, implement and submit updated Drought Contingency Plans to the TCEQ every five years.

- Holding a public meeting regarding the Plan on 4/4/2024. Public notice of this meeting was provided on the community website and in local newspapers.
- Approving the Plan at a public meeting on 4/18/2024. Public notices of this meeting were provided on the community website and live video/audio was available during the meeting.

2.02 PROGRAM FOR CONTINUING PUBLIC EDUCATION AND INFORMATION

The City of Lucas informs and educates the public about the Plan by the following means:

- Preparing information describing the plan and making it available at City Hall and/or other appropriate locations.
- Including information and making the Plan available to the public through the community website and/or social media.
- Notifying local organizations, schools, and civic groups that utility staff are available to make presentations on the Plan (usually in conjunction with presentations on water conservation programs).
- At any time that the Plan is activated or changes, the City of Lucas will notify residents and commercial businesses of the issues, the water resource management stage (if applicable), and the specific actions required of the public. The information will also be publicized on the community website and/or social media. Billing inserts will also be used as appropriate.

2.03 COORDINATION WITH THE REGIONAL WATER PLANNING GROUPS AND NTMWD

Appendix E of this Plan includes copies of letters sent to the Chairs of the appropriate regional water planning groups as well as NTMWD.

2.04 INITIATION AND TERMINATION OF WATER RESOURCE MANAGEMENT STATGES

INITITATION OF A WATER RESOURCE MANAGEMENT STAGE

The City Manager may order the implementation of a water resource management stage when one or more of the trigger conditions for that stage is met.

- NTMWD has initiated a water resource management stage. (Stages imposed by NTMWD action ***must*** be initiated by Member Cities and Customers.)

The following actions will be taken when a water resource management stage is initiated:

- Alternative methods that achieve the same level of reduction in water use can be implemented.

Variances shall be granted or denied at the discretion of the City Manager. All petitions for variances should be in writing and should include the following information:

- Name and address of the petitioners.
- Purpose of water use.
- Specific provisions from which relief is requested.
- Detailed statement of the adverse effect of the provision from which relief is requested.
- Description of the relief requested.
- Period of time for which the variance is sought.
- Alternative measures that will be taken to reduce water use and the level of water use reduction.
- Other pertinent information.

2.06 PROCEDURES FOR ENFORCING MANDATORY WATER USE RESTRICTIONS

Mandatory water use restrictions may be imposed in Stage 1, Stage 2 and Stage 3.

The City of Lucas will enforce the requirements of this plan through a variety of mechanisms based on the nature of the regulated activity or service:

- No new development or construction shall be approved if it fails to meet the requirements of this plan and all adopted city codes and ordinances.
- Any connection not approved through the permitting or development process is considered illegal and will be disconnected if discovered.
- The City will disconnect water service to customers who fail to make payments.
- The City uses an increasing block rate water structure to encourage conservation as explained in Section 8.02 (C) of this plan and may be revised for future updates to the Fee Schedule in the City of Lucas Code of Ordinances.
- The City will apply administrative fees and other penalties for violation of daily watering days and times as laid out in this plan based on proactive patrolling and reporting of violations.
- The City is committed to public education efforts intended to mitigate water loss and promote conservation.

3.01 WATER RESOURCE MANAGEMENT – STAGE 1

INITIATION AND TERMINATION CRITERIA FOR STAGE 1

NTMWD has initiated Stage 1, which may be initiated when one or more of the following criteria is met:

- **General Criteria**
    - The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 1.
    - One or more source(s) is interrupted, unavailable, or limited due to contamination, invasive species, equipment failure or other cause.
    - The water supply system is unable to deliver needed supplies due to the failure or damage of major water system components.
    - Part of the system has a shortage of supply or damage to equipment. (NTMWD may implement measures for only that portion of the system impacted.)
    - A portion of the service area is experiencing an extreme weather event or power grid/supply disruptions.
- **Demand Criteria**
    - Water demand has exceeded or is expected to exceed 90% of maximum sustainable production or delivery capacity for an extended period.
- **Supply Criteria**
    - The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is less than:
        - 70% of the combined conservation pool capacity during any of the months of April through October
        - 60% of the combined conservation pool capacity during any of the months of November through March
    - The Sabine River Authority (SRA) has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Stage 1 drought.
    - NTMWD is concerned that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, Main Stem Pump Station, and/or some other NTMWD water source may be limited in availability within the next six months.

Stage 1 may terminate when one or more of the following criteria is met:

- **General Criteria**

- **Requires notification to TCEQ by Member Cities and Customers and/or NTMWD.** Initiate a rate surcharge for all water use over a certain level.
- **Requires notification to TCEQ by Member Cities and Customers.** Parks, golf courses, and athletic fields using potable water for landscape watering are required to meet the same reduction goals and measures outlined in this stage. As an exception, golf course greens and tee boxes may be hand watered as needed.

3.02 WATER RESOURCE MANAGEMENT – STAGE 2

INITIATION AND TERMINATION CRITERIA FOR STAGE 2

NTMWD has initiated Stage 2, which may be initiated due to one or more of the following criteria is met:

- **General Criteria**
    - The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 2.
    - One or more supply source(s) is interrupted, unavailable, or limited due to contamination, invasive species, equipment failure or other cause.
    - The water supply system is unable to deliver needed supplies due to the failure or damage of major water system components.
    - Part of the system has a shortage of supply or damage to equipment. (NTMWD may implement measures for only that portion of the system impacted.)
    - A portion of the service area is experiencing an extreme weather event or power grid/supply disruptions.
- **Demand Criteria**
    - Water demand has exceeded or is expected to exceed 95% of maximum sustainable production or delivery capacity for an extended period.
- **Supply Criteria**
    - The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is less than:
        - 55% of the combined conservation pool capacity during any of the months of April through October
        - 45% of the combined conservation pool capacity during any of the months of November through March
    - SRA has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Stage 2 drought.

watering with sprinklers or irrigation systems at each service address to once every other week on designated days between November 1 and March 31. Exceptions are as follows:

- New construction may be watered as necessary for 30 days from the installation of new landscape features.
- Foundation watering (within 2 feet), watering of new plantings (first year) of shrubs, and watering of trees (within a 10-foot radius of its trunk) for up to two hours on any day by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system, provided no runoff occurs.
- Athletic fields may be watered twice per week.
- Locations using alternative sources of water supply only for irrigation may irrigate without day-of-the-week restrictions provided proper signage is employed to notify the public of the alternative water source(s) being used. However, irrigation using alternative sources of supply is subject to all other restrictions applicable to this stage. If the alternative supply source is a well, proper proof of well registration with your local water supplier (e.g., city, water supply corporation) is required. Other sources of water supply may not include imported treated water.
- An exemption is for drip irrigation systems from the designated outdoor water use day limited to no more than one day per week. Drip irrigation systems are, however, subject to all other restrictions applicable under this stage.

- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit overseeding, sodding, sprigging, broadcasting or plugging with or watering, except for golf courses and athletic fields.
- **Requires notification to TCEQ by NTMWD.** Institute a mandated reduction in water deliveries to all Member Cities and Customers. Such a reduction will be distributed as required by Texas Water Code Section 11.039 (**Appendix E**).
- **Requires notification to TCEQ by Member Cities and Customers and/or NTMWD.** Initiate a rate surcharge for all water use over a certain level.
- **Requires notification to TCEQ by Member Cities and Customers.** Parks and golf courses using potable water for landscape watering are required to meet the same reduction goals and measures outlined in this stage. As an exception, golf course greens and tee boxes may be hand watered as needed.

3.03 WATER RESOURCE MANAGEMENT – STAGE 3

INITIATION AND TERMINATION CRITERIA FOR STAGE 3

- Other circumstances that caused the initiation of Stage 3 no longer prevail.

- **Supply Criteria**
  - The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is greater than:
    - 55% of the combined conservation pool capacity during any of the months of April through October
    - 45% of the combined conservation pool capacity during any of the months of November through March

GOAL FOR USE REDUCTION UNDER STAGE 3

The goal for water use reduction under Stage 3 is an annual reduction of 30% in the use that would have occurred in the absence of water resource management measures, or the goal for water use reduction is whatever reduction is necessary. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 30% in summer to achieve an annual savings goal of 30%. **If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 3

The actions listed below are provided as potential measures to reduce water demand. NTMWD may choose to implement any or all of the available restrictions in Stage 3.

- Continue or initiate any actions available under the water conservation plan and Stages 1 and 2.
- Implement viable alternative water supply strategies.
- **Requires notification to TCEQ by NTMWD.** Require Member Cities and Customers (including indirect Customers) to initiate Stage 3 restrictions in their respective, independently adopted water resource management plans.
- **Requires notification to TCEQ by Member Cities and Customers.** Initiate mandatory water use restrictions as follows:
  - Hosing and washing of paved areas, buildings, structures, windows or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment.
  - Prohibit operation of ornamental fountains or ponds that use potable water except where supporting aquatic life.
- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit new sod, overseeding, sodding, sprigging, broadcasting or plugging with or watering.

Appendix A

List of References

The following appendix contains a list of references used throughout the plans.

Appendix B
Texas Administrative Code Title 30 Chapter 288

The following appendix contains the Texas Administrative Code that regulates both water conservation and drought contingency plans. Prior to the code, a summary is given that outlines where each requirement is fulfilled within the 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, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

(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

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

(16) 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.

(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) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

(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 coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) 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).

(25) 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

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;

(I) single family;

(II) multi-family;

(ii) commercial;

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(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;

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 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 device(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 in 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

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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

TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 288	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
SUBCHAPTER B	DROUGHT CONTINGENCY PLANS
RULE §288.20	**Drought Contingency Plans for Municipal Uses by Public Water Suppliers**

(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

(1) Minimum requirements. Drought contingency plans must include the following minimum elements.

(A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.

(B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.

(C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.

(D) The drought contingency plan must include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.

(E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:

(i) reduction in available water supply up to a repeat of the drought of record;

(ii) water production or distribution system limitations;

(c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.

Source Note: The provisions of this §288.20 adopted 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

(4) The drought contingency plan must include a minimum of three drought or emergency response stages providing for the implementation of measures in response to water supply conditions during a repeat of the drought-of-record.

(5) The drought contingency plan must include the procedures to be followed for the initiation or termination of drought response stages, including procedures for notification of wholesale customers regarding the initiation or termination of drought response stages.

(6) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this paragraph are not enforceable.

(7) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:

(A) pro rata curtailment of water deliveries to or diversions by wholesale water customers as provided in Texas Water Code, §11.039; and

(B) utilization of alternative water sources with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).

(8) The drought contingency plan must include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

(9) The drought contingency plan must include procedures for granting variances to the plan.

Appendix C

TCEQ Water Utility Profile

The following appendix contains the form TCEQ-10218 and/or TCEQ-20162.

Utility Profile

I. POPULATION AND CUSTOMER DATA

A. *Population and Service Area Data*

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

2. Service area size (in square miles): 17.43

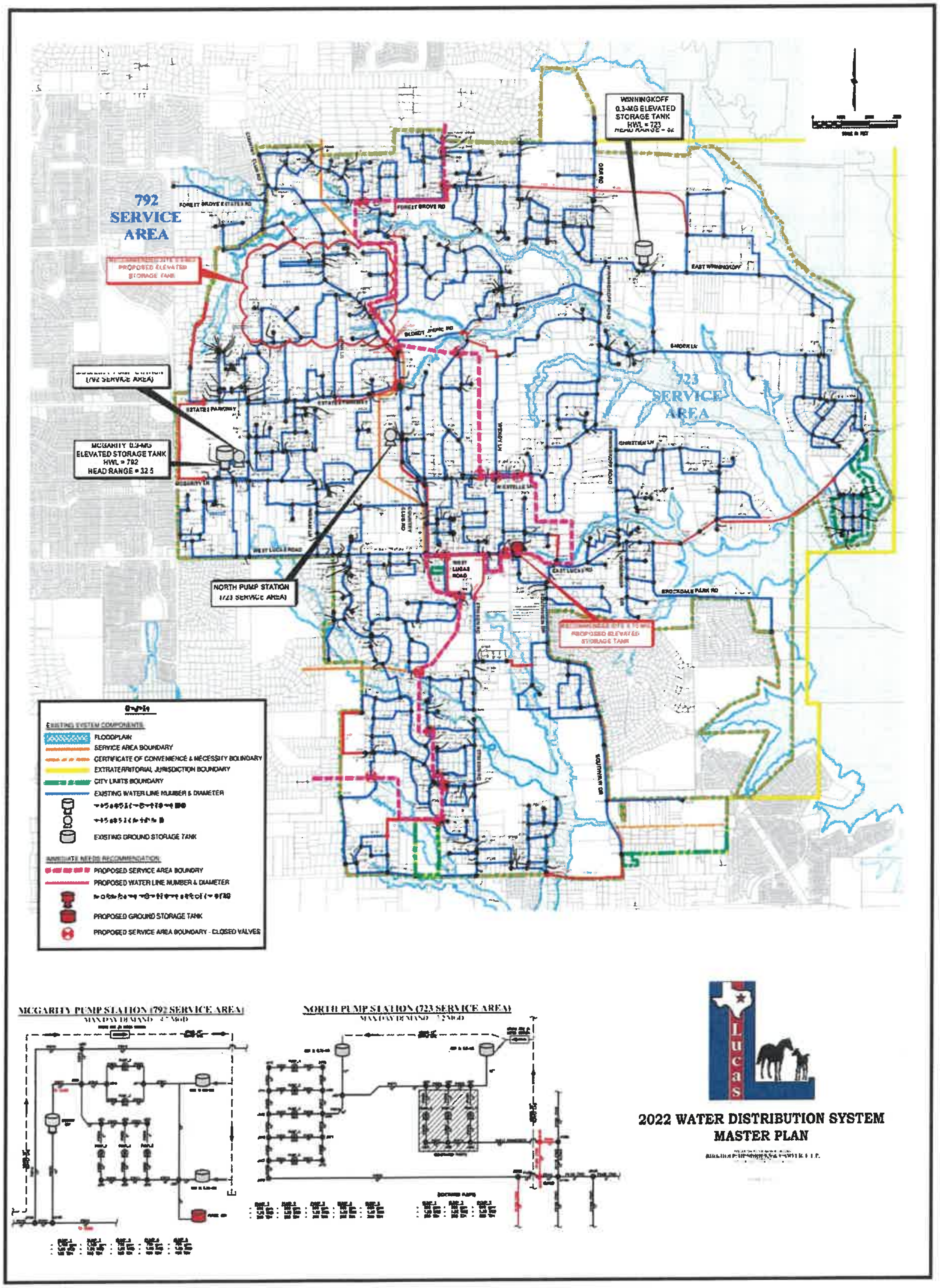
   (Please attach a copy of service-area map)

3. Current population of service area: 8,853

4. Current population served for:

   a. Water 8,751

   b. Wastewater 45


792 SERVICE AREA
723 SERVICE AREA
WINNINGKOFF 0.3-MG ELEVATED STORAGE TANK HWL = 723
PROPOSED ELEVATED STORAGE TANK
(792 SERVICE AREA)
MCGARITY 0.3-MG ELEVATED STORAGE TANK HWL = 792 HEAD RANGE = 32.5
NORTH PUMP STATION (723 SERVICE AREA)
FOREST GROVE RD
EAST WINNINGKOFF
SHOREY LN
BLONDY JHUNE RD
ESTATES PARKWAY
WEST LUCAS ROAD
EAST LUCAS RD
BROCKDALE PARK RD
WEST LUCAS ROAD
SOUTHVIEW DR
FLOODPLAIN
SERVICE AREA BOUNDARY
CERTIFICATE OF CONVENIENCE & NECESSITY BOUNDARY
EXTRATERRITORIAL JURISDICTION BOUNDARY
CITY LIMITS BOUNDARY
EXISTING WATER LINE NUMBER & DIAMETER
EXISTING GROUND STORAGE TANK
PROPOSED SERVICE AREA BOUNDRY
PROPOSED WATER LINE NUMBER & DIAMETER
PROPOSED GROUND STORAGE TANK
PROPOSED SERVICE AREA BOUNDARY - CLOSED VALVES
MCGARITY PUMP STATION (792 SERVICE AREA)
NORTH PUMP STATION (723 SERVICE AREA)
Lucas
2022 WATER DISTRIBUTION SYSTEM MASTER PLAN

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

	Historic 5-year Average	*Baseline*	*5-year goal for year 2029*	*10-year goal for year 2034*
Total GPCD	197	259	154	150
Residential GPCD	170	222	145	140
Water Loss GPCD	16	25	14	13
Water Loss Percentage	8	10	11	10

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

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

Treated Water Users	*Metered*	*Non-Metered*	*Totals*
Residential	2829		2829
Single-Family	2829		2829
Multi-Family			
Commercial	72		72
Industrial/Mining			
Institutional	50		50
Agriculture			
Other/Wholesale			

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

Year	2020	2021	2022
Treated Water Users			
Residential	49	129	152
Single-Family	49	129	152
Multi-Family			
Commercial	-1	2	18
Industrial/Mining	2	-2	0
Institutional	0	0	0
Agriculture			
Other/Wholesale			

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

Year	2018	2019	2020	2021	2022
Account Types					
Residential	467,281	493,275	514,076	478,525	646,872
Single-Family	467,281	493,275	514,076	478,525	649,872
Multi-Family					
Commercial	9,210	11,085	15,166	16,516	16,172
Industrial/Mining	311	178	225	0	0
Institutional	14,823	15,288	17,590	9,318	11,544
Agriculture					
Other/Wholesale					

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

Year	*Amount (gallons)*	*Percent %*
2018	70,500,000	12
2019	43,300,000	8
2020	7,200,000	1
2021	43,600,000	8
2022	72,700,000	10

B. Projected Water Demands

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

III. WATER SUPPLY SYSTEM DATA

A. Water Supply Sources

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

Year	2018	2019	2020	2021	2022
Month					
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
Totals	0	0	0	0	0

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

I. Enforcement Procedure and Plan Adoption

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

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

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

K. Plan Review and Update

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

VI. ADDITIONAL REQUIREMENTS FOR LARGE SUPPLIERS

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

A. Leak Detection and Repair

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

B. Contract Requirements

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

VII. ADDITIONAL CONSERVATION STRATEGIES

Appendix D

NTMWD Member City and Customer Annual Water Conservation Report

The following appendix contains a blank copy of the NTMWD Member City and Customer Annual Water Conservation Report. This is updated and reviewed by NTMWD on an annual basis.

Water Conservation Plan 5- and 10-Year Goals for Water Savings

	5-Year Goal	10-Year Goal	
Total GPCD			*Total GPCD = (Total Gallons in System + Permanent Population) / 365*
Residential GPCD			*Residential GPCD = (Gallons Used for Residential Use / Residential Population) / 365*
Water Loss (GPCD)			*Water Loss GPCD = (Total Water Loss / Permanent Population) / 365*
Water Loss (Percentage)			*Water Loss Percentage = (Total Water Loss / Total Gallons in System) x 100; or (Water Loss GPCD / Total GPCD) x 100*

Retail Water Metered by Month (in Million Gallons):

Month	Sales by Category								
	Residential Single Family	Residential Multi-Family	Public/ Institutional	Commercial	Industrial	Agriculture	Metered Irrigation	Wholesale	Direct Reuse
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									
TOTAL									
# of Connections (or Units)									

Recorded Supplies from Sources by Month (in Million Gallons):

Month	Deliveries from NTMWD	Other Sources							Total Supplies
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									
TOTAL									

Wholesale Water Sales to Other Water Systems (in Million Gallons):

	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5	Sale 6	Sale 7	Sale 8	Total Wholesale Sales
Buyer Name									
Type of Water									
Name of Source									
Estimated Water Service Area Population									
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									
TOTAL									

Water Sales to Industrial Production Facilities (in Million Gallons):

	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5	Sale 6	Sale 7	Sale 8	Total Industrial Production Facilities Sales
Buyer Name									
Type of Water									
Name of Source									
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									
TOTAL									

Is there any Assistance Requested from the North Texas Municipal Water District?

Other?

Historical Per Capita Use Data and Water Loss for D

Year	Estimated Population	Total Use			Residential Use			Municipal Per Capita Use (gpcd)	ICIM Per Capita Use (gpcd)	Authorized Consumption				Water Loss						
		Total Per Capita Use (gpcd)	Total 5-Year Per Capita Goal	Total 10-Year Per Capita Goal	Residential Per Capita Use (gpcd)	Residential 5-Year Per Capita Goal	Residential 10-Year Per Capita Goal			Billed Metered (MG)	Billed Unmetered (MG)	Unbilled Metered (MG)	Unbilled Unmetered (MG)	Water Loss (MG)	Water Loss (gpcd)	Water Loss 5-Year Per Capita Goal	Water Loss 10-Year Per Capita Goal	Water Loss (percentage)	Water Loss (percentage) 5 Year Goal	Water Loss (percentage) 10 Year Goal
1990																				
1991																				
1992																				
1993																				
1994																				
1995																				
1996																				
1997																				
1998																				
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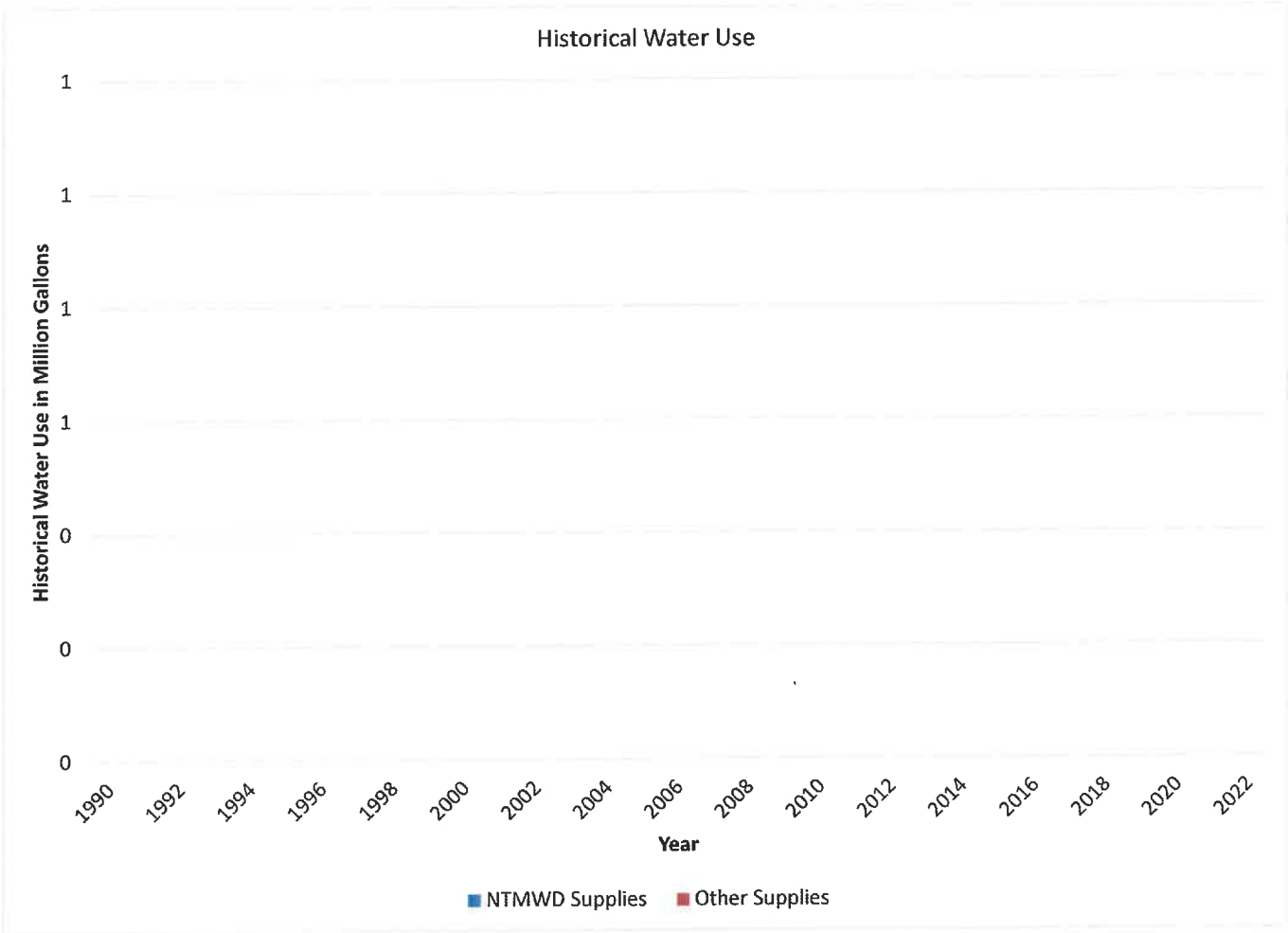
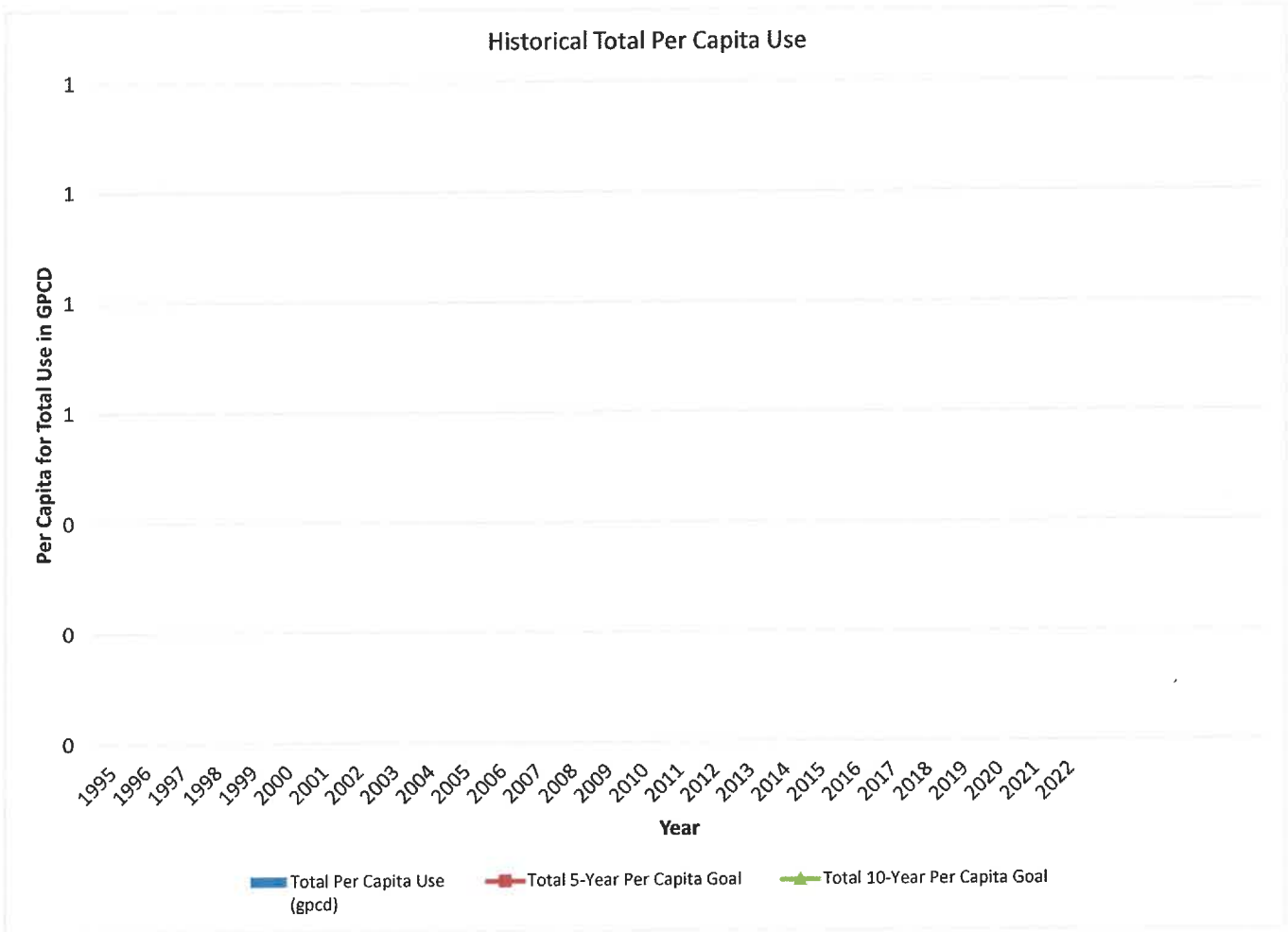
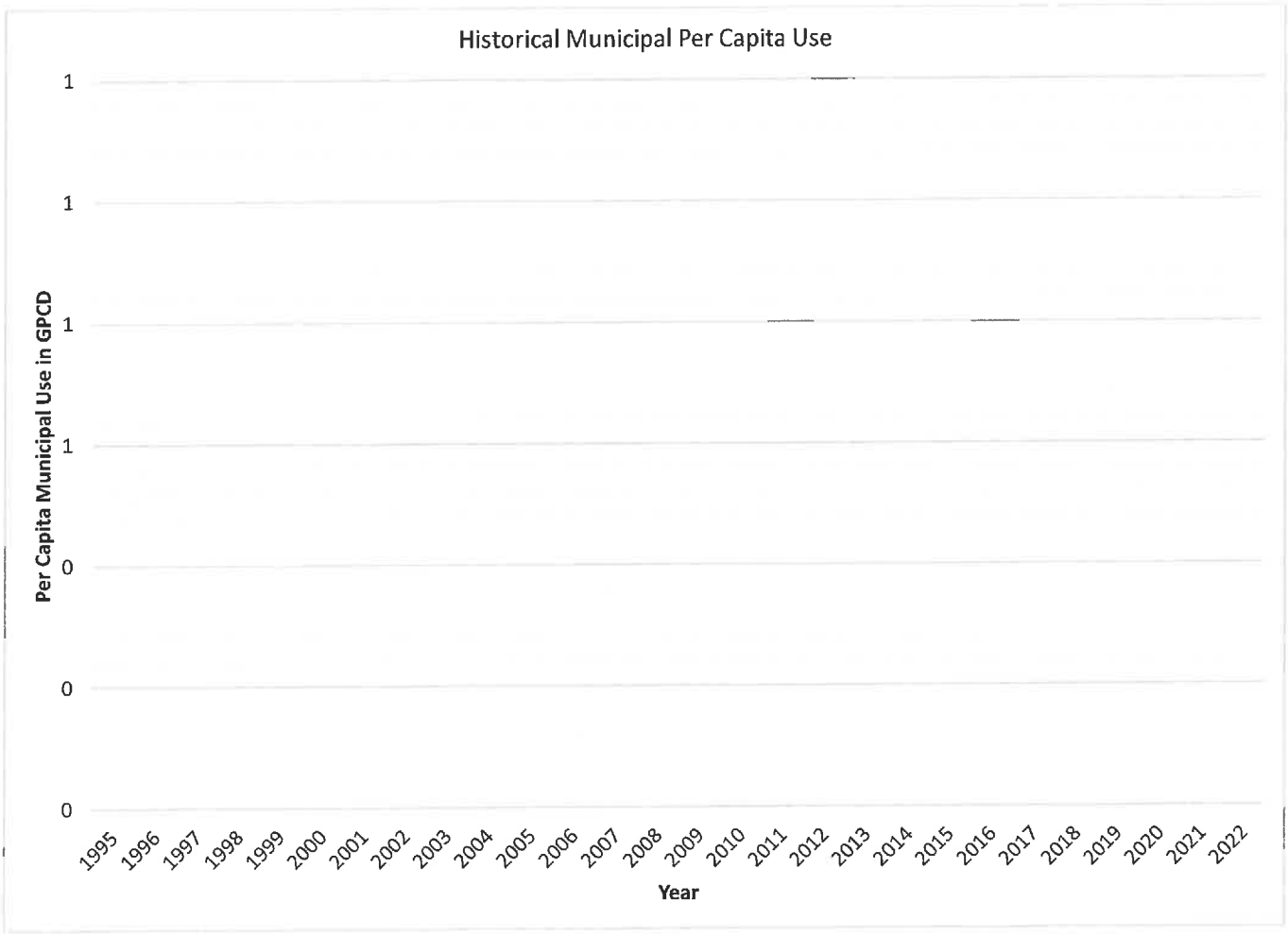
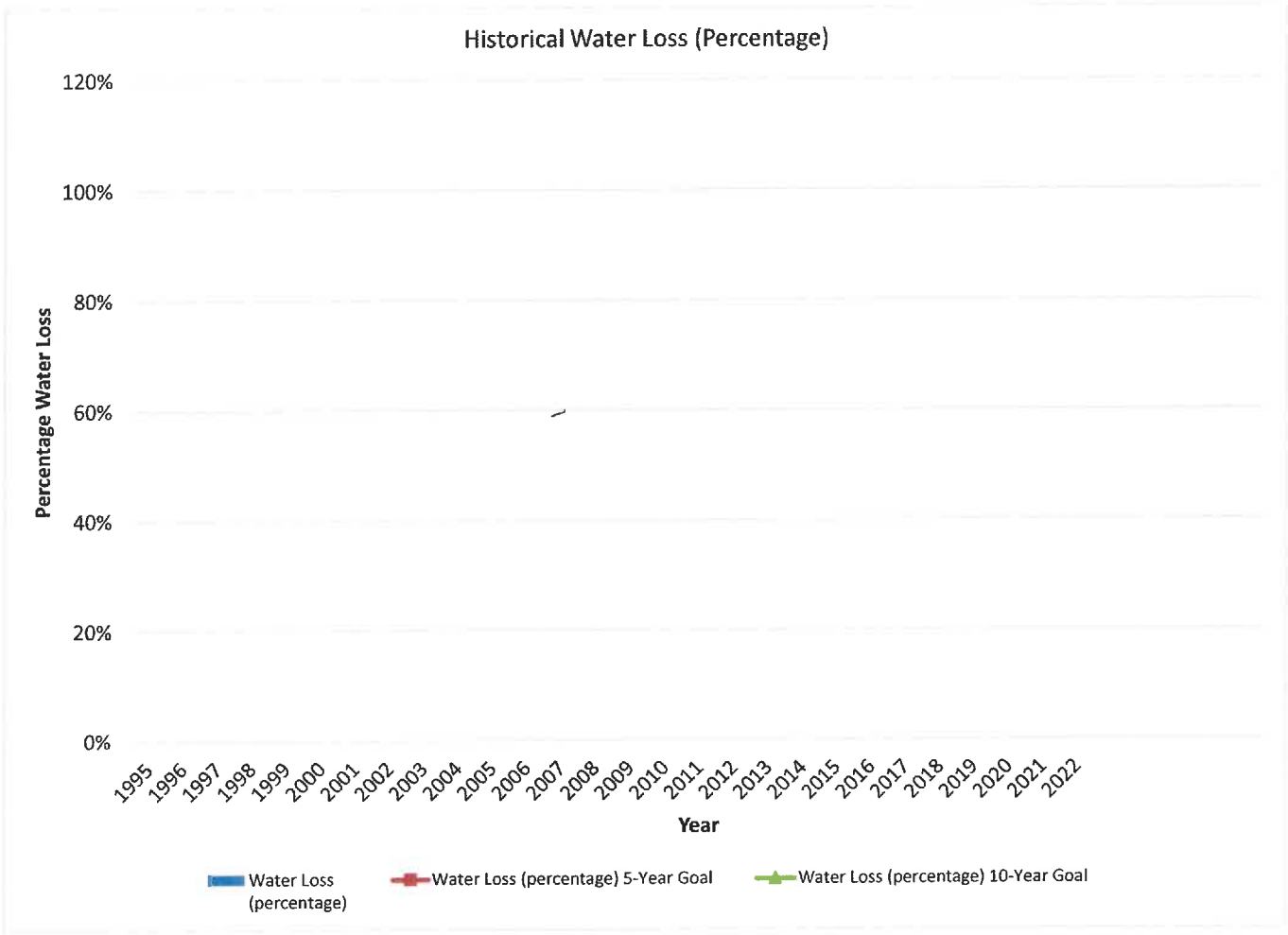
2019																				
2020																				
2021																				
2022																				

Note:
In-city municipal use = total water supplied less sales to industry, wholesale sales and other sales.
After 2017 - Unaccounted Water has been removed and replaced with Water Losses (per TWDB definition). This category is inclusive of real and apparent losses. Categories for authorized consumption were also added; Unbilled metered replaced estimated fire use, unbilled unmetered replaced estimated line flushing, and a new category for billed unmetered sales was added.


Historical Water Use
Historical Water Use in Million Gallons
1
1
1
1
0
0
0
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
Year
NTMWD Supplies
Other Supplies


Historical Total Per Capita Use
Per Capita for Total Use in GPCD
1
1
1
1
0
0
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year
Total Per Capita Use (gpcd)
Total 5-Year Per Capita Goal
Total 10-Year Per Capita Goal


Historical Municipal Per Capita Use
Per Capita Municipal Use in GPCD
1
1
1
1
0
0
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year


Historical Water Loss (Percentage)
120%
100%
80%
60%
40%
20%
0%
Percentage Water Loss
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year
Water Loss (percentage)
Water Loss (percentage) 5-Year Goal
Water Loss (percentage) 10-Year Goal

Appendix E

Letters to Regional Water Planning Group and NTMWD

4/24/2024

Region D Water Planning Group
c/o Riverbend Water Resources District
228 Texas Avenue Suite A
New Boston, TX 75570

Dear Chair:

Enclosed is a copy of the Water Conservation and Water Resource and Emergency Management Plan for City of Lucas. I am submitting a copy of this plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The plans were adopted on 4/18/2024.

Sincerely,

Jeremy Bogle

Public Works Supervisor

City of Lucas

ORDINANCE # 2024-04-00999
[Amending Code of Ordinances, Article 13.03, "Water Conservation Plan and Water Resource and Emergency Management Plan"]

AN ORDINANCE OF THE CITY OF LUCAS, TEXAS, AMENDING THE CODE OF ORDINANCES BY AMENDING CHAPTER 13 "UTILITIES" BY AMENDING ARTICLE 13.03 "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN" BY AMENDING SECTION 13.03.001 "ADOPTION OF PLANS" TO ADOPT THE "NORTH TEXAS MUNICIPAL WATER DISTRICT 2024 MODEL WATER CONSERVATION AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN GUIDANCE" (THE "PLAN"); BY AMENDING SECTION 13.03.002 "PENALTY" TO SET FORTH A FINE OF TWO THOUSAND DOLLARS ($2,000.00) FOR ANY CUSTOMER THAT VIOLATES THE PLAN; BY AMENDING SECTION 13.03.003 BY AMENDING 13.03.003(1) "ADMINISTRATIVE REMEDIES" TO SET FORTH NEW ADMINISTRATIVE REMEDIES FOR ALL RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS THAT VIOLATE THE PLAN; BY AMENDING 13.03.003(2) "CONTESTING VIOLATIONS" TO ADD NEW REQUIREMENTS FOR CONTESTING VIOLATIONS OF THE PLAN; BY ADDING A NEW SECTION 13.03.004 "PAYING ASSESSED FEES"; BY RENUMBERING 13.03.004 "ENFORCEMENT" TO 13.03.005; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS ($2,000.00) FOR EACH OFFENSE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Lucas, Texas (the "City"), recognizes that the amount of water available to its water customers is limited; and

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

WHEREAS, the Water Code and the regulations of the Texas Commission on Environmental Quality (the "Commission") require that the City adopt a Water Conservation Plan and a Water Resource and Emergency Management Plan; and

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

DELETE:

~~(a) It is unlawful for any person to violate the provisions of the plan.~~

~~(b) For a first violation of any provision of the plan or this article, the city shall issue a letter and provide educational materials on water conservation, including a copy of the relevant provisions of this article to the water user violating the provisions of this article. The city shall give the water user a reasonable time to correct the violation.~~

~~(c) For a second violation of any provision of the plan or this article, the city shall issue the water user a citation and upon conviction shall be subject to a fine not to exceed the sum of two thousand dollars ($2,000.00).~~

~~(d) The city's current five-tier level conservation rate structure is in effect year round to encourage ongoing water conservation. Additional rate surcharges may be established when it is required to meet the reduction goal in each respective stage of this article.~~

Add:

Any customer, defined pursuant to 30 Texas Administrative Code, chapter 291, failing to comply with the provisions of the plan shall be subject to a fine of up to $2,000.00 per day per occurrence and/or discontinuance of water service by the city. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a customer fails to comply with the plan is a separate violation. The city's authority to seek injunctive or other civil relief available under the law is not limited by this section.

. . .

AMEND 13.03.003:

§ 13.03.003 **Administrative remedies.**

The city may elect to exercise the following administrative remedies for violations of the city plan in lieu of pursuing criminal penalties against **all residential and non-residential** ~~nonsingle family~~ water account holders, such as business and professional parks, homeowners' associations, home builders, land developers, and **any other** entities. ~~other than customers residing at single family homes.~~

AMEND (1):

(1) Administrative fees. The following administrative fees that will be added to the customer's regular monthly utility bill shall apply:

First offense	~~$200.00~~ **Certified letter notifying of violation**
Second offense	$500.00
Third and subsequent offenses	$2,000.00

remaining portions of said Ordinances or the City of Lucas Code of Ordinances, as amended hereby, which shall remain in full force and effect.

SECTION 3. An offense committed before the effective date of the Ordinance is governed by prior law and the provisions of the City of Lucas Code of Ordinances in effect when the offense was committed and the former law is continued in effect for this purpose.

SECTION 4. Any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the City of Lucas Code of Ordinances, as amended, and upon conviction shall be punished by a fine not to exceed the sum of Two Thousand Dollars ($2,000.00) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

SECTION 5. This Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Lucas, and it is accordingly so ordained.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 18TH DAY OF APRIL, 2024.

APPROVED:

Jim Olk, Mayor

APPROVED AS TO FORM:

Joseph J. Gorfida, Jr., City Attorney

ATTEST:

Toshia Kimball, City Secretary

CITY OF LUCAS, TEXAS
SEAL