City of Melissa

2024 Water Conservation and Water Resource and Emergency Management Plan

Adopted on 4/9/2024

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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.

ET/SMART CONTROLLERS are irrigation controllers that adjust their schedule and run times based on weather (ET) data. These controllers are designed to replace the amount of water lost to evapotranspiration.

EVAPOTRANSPIRATION (ET) represents the amount of water lost from plant material to evaporation and transpiration. The amount of ET can be estimated based on the temperature, wind, and relative humidity.

EXECUTIVE DIRECTOR means the Executive Director of NTMWD and includes a person the Executive Director has designated to administer or perform any task, duty, function, role, or action related to this Plan or on behalf of the Executive Director.

FOUNDATION WATERING means an application of water to the soils directly abutting (within 2 feet of) the foundation of a building or structure.

INTERACTIVE WATER FEATURES means water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, inflatable pools, temporary splash toys or pools, slip-n-slides, or splash pads that are maintained for recreation.

IRRIGATION SYSTEM means a permanently installed, custom-made, site-specific system of delivering water generally for landscape irrigation via a system of pipes or other conduits installed below ground.

LANDSCAPE means any plant material on a property, including any tree, shrub, vine, herb, flower, succulent, ground cover, grass or turf species, that is growing or has been planted out of doors.

MEMBER CITIES include the cities of Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Plano, Princeton, Richardson, Rockwall, Royse City, and Wylie, Texas, which are members of NTMWD.

MUNICIPAL USE means the use of potable water provided by a public water supplier as well as the use of treated wastewater effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

NEW LANDSCAPE means: (a) vegetation installed at the time of the construction of a residential or commercial facility; (b) installed as part of a governmental entity's capital improvement project; or (c) installed to stabilize an area disturbed by construction.

ORNAMENTAL FOUNTAIN means an artificially created structure from which a jet, stream, or flow of treated water emanates and is not typically utilized for the preservation of aquatic life.

POND is considered to be a still body of water with a surface area of 500 square feet or more. This does not include recreational swimming pools.

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.

WATER CONSERVATION COORDINATOR is the person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

WATER CONSERVATION PLAN means the Member City or Customer water conservation plan approved and adopted by the utility.

WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN means a plan for temporary supply management and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies required by Texas Administrative Code Title 30, Chapter 288, Subchapter B. This is sometimes called a drought contingency plan.

ABBREVIATIONS

Ac-Ft/Yr ..... Acre-Feet per Year
BMP ..... Best Management Practices
CDC ..... Centers for Disease Control and Prevention
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

2024 Water Conservation Plan

This Water Conservation Plan has been developed in accordance with the requirements of 30 Texas Administrative Code (TAC) Chapter 288. A copy of the version of 30 TAC Chapter 288 in place at the time of this Plan preparation is included in Appendix B.

1.00 INTRODUCTION

City of Melissa 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, 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.

- **Guidance and Methodology for Reporting on Water Conservation and Water Use** - Developed by TWDB and TCEQ in consultation with the Water Conservation Advisory Council (the Guidance). The Guidance was developed in response to a charge by the 82nd Texas Legislature to develop water use and calculation methodology and guidance for preparation of water use reports and water conservation plans in accordance with TCEQ rules.
- **North Texas Regional Landscape Initiative –** The North Texas regional water providers (NTMWD, DWU and TRWD) 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, importance, and benefits of each BMP and key talking points to consider when implementing the strategy. Several of the optional water management measures included in this Plan are from this collaborative initiative.

2.00 WATER UTILITY PROFILE

This section contains a description of City of Melissa's service area and water system. This information can also be reviewed in **Appendix C**, which contains a completed TCEQ Water Utility Profile.

2.01 DESCRIPTION OF THE SERVICE AREA

PUC Water CCN # 11482

2.02 WATER UTILITY PROFILE

City of Melissa's existing water supply is composed of the following sources.

- Purchased Treated Water from NTMWD
- Purchased Treated Water from GTUA
- Self-Supplied Groundwater pumped from the Woodbine Aquifer

3.00 WATER CONSERVATION GOALS

TCEQ rules require the adoption of specific 5-year and 10-year water conservation goals for a water conservation plan.

3.01 5- AND 10-YEAR GOALS

Per capita water use varies from year to year based on several factors including weather conditions, changing demographics and other variables. The TWDB requires specific 5- and 10-year goals which are summarized in **Table 1**.

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]	111.8	111.8	120	120
Residential (GPCD)[2]	66	66	85	85
ICIM (GPCD)[3]	9.6	9.6	10	10
Water Loss (GPCD)[4]	9.2	9.2	11	11
Water Loss (Percentage)[5]	7.8	7.8	9	9

[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 City of Melissa 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.

METERING OF CUSTOMER AND PUBLIC USES

Customer and public water use is metered using City of Melissa Advanced Metering Infrastructure ("AMI") metering system.

METER TESTING, REPAIR AND REPLACEMENT

Using the technology of the City of Melissa's AMI system, meter technicians monitor data and hardware daily for anomalies relating to meter accuracy. If anomalies are observed, meter testing takes place. Full meter replacement is scheduled and phased across the entire water system based on meter life. Entry point meters are calibrated yearly. All hydrant construction meters are calibrated yearly.

4.02 MONITORING AND RECORD MANAGEMENT PROGRAM

As required by TAC Title 30, Chapter 288, a record management system should allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information is included in the NTMWD annual water conservation report that is included in **Appendix D**.

4.03 WATER LOSS CONTROL PROGRAM

DETERMINATION AND CONTROL OF WATER LOSS

Total water loss is the difference between treated water pumped and authorized consumption or metered deliveries to customers. Authorized consumption includes billed metered uses, unbilled metered uses, and unbilled unmetered uses such as firefighting and releases for flushing of lines.

Water losses include two categories:

- Apparent losses such as inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use). Unauthorized consumption due to illegal connections and theft.
- Real losses due to water main breaks and leaks in the water distribution system and unreported losses.

LEAK DETECTION AND REPAIR

Leak detection program started in April 2018 and is performed on a weekly basis, covering the entire City on a rotation. Public Works Maintenance Workers utilize leak detection equipment to identify leaks. When a leak is identified, repairs are completed within 48 hours of leak detection.

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 of City of Melissa 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 288.

6.00 RESERVOIR SYSTEM OPERATIONS PLAN

City of Melissa 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 G** contains a copy of the ordinance adopted regarding this Plan. The document designates responsible officials to implement and enforce the Plan.

Implementation and enforcement of water conservation plan starts with public education and outreach. Construction water use is restricted during high demand conditions. The city can and will refuse to provide water service at sites of new construction or substantial remodeling for customers who do not meet requirements for water conservation fixtures as established by the International Plumbing Code and Amendments. The city also actively shuts off water service to customers who fail to pay their water bill. In addition, city will:

- Analyze water rates and adjust them to eliminate conservation plan abuse (e.g. higher tiers paying more per gallon, etc.)
- Issue penalties or fines of users who do not comply with the provisions of the adopted plans (Code Enforcement/Municipal Court)
- Discontinue water service to irrigation meters and fire hydrant meters under described drought conditions (Code Enforcement)

7.02 REVIEW AND UPDATE OF WATER CONSERVATION PLAN

TCEQ requires that the water conservation plan be updated every five years. This Plan will be updated as required and as appropriate based on new or updated information.

7.03 REGIONAL WATER PLANNING GROUP AND NTMWD NOTIFICATION

In accordance with TCEQ regulations, a copy of this water conservation plan was provided to the Region C Water Planning Group. In accordance with NTMWD contractual requirements, a

copy of this water conservation plan was also sent to NTMWD. **Appendix F** includes a copy of the letters sent.

8.00 WATER CONSERVATION PROGRAM

8.01 PUBLIC EDUCATION PROGRAM

A. NTMWD PUBLIC EDUCATION PROGRAM AND TECHNICAL ASSISTANCE

City of Melissa obtains water conservation support from the NTMWD. This includes several public education and outreach efforts such as:

- Beginning in 2006 and continuing through 2018, NTMWD invested in the development and implementation of the "Water IQ: Know Your Water" campaign, including newspaper ads, radio spots, billboards, a website, and other forms of communication all intended to educate the public regarding water use and water conservation. During the 2017 campaign, over a quarter of a million people were reached by the program through media relations, outreach and interactive media. The total audience reached through the campaign in 2017 was over 88 million impressions.

- In 2013, NTMWD participated in the "Water My Yard" program to install weather stations throughout its service area to provide consumers with a weekly email or text message and information through the Water My Yard website recommending the adequate amount of supplemental water that is needed to maintain healthy grass in specific locations. This service represents the largest network of weather stations 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, importance, and benefits of each BMP and key talking points to consider when implementing the strategy. Several of the optional water management measures included in this Plan are from this collaborative initiative.
- The 2023 campaign will include a focus on short HGTV-style web series about converting yards into drought-resistant, water-conservative yardscapes.

Conservation materials and more are made available to Member Cities and Customers through an online portal that is hosted by NTMWD. In addition to the portal the NTMWD actively provides technical assistance through the following:

- NTMWD holds **Regularly Scheduled Meetings** with Member Cities and Customers for water supply updates, public campaign strategies, and legislative activities related to water and water conservation.
- NTMWD purchases **American Water Works Association Research Foundation Publications** for use by Member Cities and Customers to further enhance resources for

water efficiency, water rate structures, etc. Additionally, NTMWD pays for Member City and Customer membership to the **Alliance for Water Efficiency**.

- To assist its Member Cities and Customers in the development of their own water conservation plans, NTMWD has developed a **Model Water Conservation Plan for NTMWD Member Cities and Customers.** The Model Water Conservation Plan addresses TCEQ requirements for water conservation plans for municipal use by public water suppliers and includes advanced water conservation strategies beyond TCEQ requirements that mirror the NTMWD plan. This is available online at https://www.ntmwd.com/login/portal/.

- Since 2003, NTMWD has held **Water Conservation Workshops** for staff of its Member Cities and Customers. These workshops have covered several conservation-related topics, including TCEQ requirements for water conservation and drought contingency plans, advanced water conservation strategies, current NTMWD water conservation efforts, water conservation programs of the cities, current drought status, progress on future water supplies, and related topics. These workshops also provide training and education regarding water use accounting, irrigation evaluations, industrial, commercial, and institutional audits, and other procedures. Additional examples include workshops on Water Loss Audit Training as well as on the TWDB Water Conservation Planning Tool.

- Based on the annual reporting data collected from Member Cities and Customers from 2022, approximately 24% of the District's treated water sales went to supply ICIM users within their service area. To target programs for this customer base, the District hired Plummer Associates, Inc. to create the **Industrial, Commercial, Institutional and 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.

B. PUBLIC EDUCATION PROGRAM

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

- Publish and point City of Melissa water customers to all education materials produced by NTMWD, including the "Water My Yard" website.
- Include water conservation information in The Melissa Minute, the City's weekly e-newsletter
- Insert water conservation information with water bills. Inserts will include materials developed by City of Melissa staff and materials obtained from NTMWD, TWDB, TCEQ, and other sources.
- Notify local organizations, school, and civic groups that the City of Melissa staff are available to make presentation on the importance of water conservation and ways to save water.
- City of Melissa Water Conservation Website: https://www.cityofmelissa.com/453/Irrigation-Usage-and-Water-Conservation

8.02 REQUIRED CONSERVATION STRATEGIES

The following water conservation strategies are required. These strategies represent minimum measures to be implemented and enforced to promote water conservation and are to remain in effect on a permanent basis.

A. TCEQ CONSERVATION PLAN REQUIREMENTS

The preceding sections cover the regulatory requirements identified in TAC Title 30, Part 1, Chapter 288, Subchapter B, Rule 288. These rules are included in **Appendix B**.

B. CONSERVATION COORDINATOR

The designation of a Conservation Coordinator is required by House Bill 1648, effective September 1, 2017, for all retail public water utilities with 3,300 service connections or more. The NTMWD requires that all Member Cities and Customers, regardless of number of connections, appoint a Conservation Coordinator who will serve as the primary point of contact between the entity and the District on conservation matters.

The duties of the Conservation Coordinator are as follows:

- Submit an annual conservation report to NTMWD by March 31. This is referred to as the 'Appendix D Report'. NTMWD will provide a blank workbook for each Member City and Customer to fill out prior to the deadline.
- Submit an adopted water conservation and water resource and emergency management plan by May 1, 2024 (and every five years afterwards). These plans must be submitted to NTMWD, the applicable Regional Water Planning Group, TCEQ and TWDB. The conservation coordinator is also responsible for submitting a copy of the Plan if it is updated after initial adoption and submission.

City of Melissa's Conservation Coordinator is identified below. City of Melissa will notify NTMWD if this changes at any point before the water conservation plan is updated.

Bridget Saxton
972-838-1380
communications@cityofmelissa.com

C. 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.

City of Melissa's water rate structure is as follows:

Residential Rates

Minimum Charge

Size of Meter (in inches)	Amount
0.626 to 0.750	$24.52
0.751 to 01.000	$72.58
01.001 to 01.500	$139.89
01.501 to 02.000	$220.65
02.001 to 03.000	$409.10
03.001 to 04.000	$661.15
04.001 to 06.000	$957.78
06.001 to 08.000	$1,530.04
08.001 to 10.000	$2,197.69
Greater than 10.000	To Be Determined by the City of Melissa

Gallons	Amount (Per 1,000 Gallons or Fraction Thereof)
1 to 10,000	$5.91
10,001 to 15,000	$9.48
15,001 to 50,000	$11.49
Over 50,000	$12.02

Commercial/Industrial Rates

Non-Residential

Gallons	Amount (Per 1,000 Gallons or Fraction Thereof)
1 to 10,000	$6.41
10,001 to 15,000	$8.61
15,001 to 50,000	$8.61
Over 50,000	$8.61

Non-Residential Irrigation

Gallons	Amount (Per 1,000 Gallons or Fraction Thereof)
1 to 10,000	$5.91
10,001 to 15,000	$9.48
15,001 to 50,000	$11.49
Over 50,000	$12.02

Industrial

Gallons	Amount (Per 1,000 Gallons or Fraction Thereof)
1 to 10,000	$5.91
10,001 to 15,000	$9.48
15,001 to 50,000	$11.49
Over 50,000	$12.02

D. ORDINANCES, PLUMBING CODES, OR RULES ON WATER-CONSERVING FIXTURES

City of Melissa's plumbing code standards encourages water conservation and meets the minimum statutory requirements. The state has required water-conserving fixtures in new construction and renovations since 1992. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 2.5 gpm for showerheads. As of January 1, 2014, the state requires maximum average flow rates of 1.28 gallons per flush (gpf) for toilets and 0.5 gpf for urinals. Similar standards are now required under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures.

E. REUSE AND RECYCLING OF WASTEWATER

NTMWD currently has the largest wastewater reuse program in the state. NTMWD has water rights allowing reuse of up to 71,882 acre-feet per year (64 MGD) of treated wastewater discharges from the Wilson Creek Wastewater Treatment Plant for municipal purposes. Additionally, NTMWD has permitted and is currently constructing the Sister Grove Regional Water Resource Recovery Facility (WRRF) in the Lavon Lake watershed. This facility will have an initial capacity of 16 MGD and an ultimate capacity of 64 MGD.

NTMWD has also developed the East Fork Water Reuse Project which can divert treated wastewater discharges by NTMWD and purchased wastewater return flows from TRA via Main Stem Pump Station. NTMWD also provides treated effluent from its wastewater treatment plants available for direct reuse for landscape irrigation and industrial use.

F. YEAR-ROUND OUTDOOR WATERING SCHEDULES

A mandatory weekly watering schedule has been gradually gaining acceptance in the region and the state. NTMWD requires all Member Cities and Customers to adhere to a permanent outdoor watering schedule.

- **Summer (April 1 – October 31)** –Spray irrigation with sprinklers or irrigation systems at each service address must be limited to no more than **two days per week**. Additionally, prohibit lawn irrigation watering from **10 a.m. to 6 p.m.** Education should be provided that irrigation **should only be used when needed**, which is often less than twice per week, even in the heat of summer.

- **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.

G. 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.

H. 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.

4) Require the owner of a regulated irrigation property to obtain an evaluation of any permanently installed irrigation system on a yearly basis. The irrigation evaluation shall be conducted by a licensed irrigator in the state of Texas and be submitted to the local water provider (i.e., city, water supply corporation).

I. WATER WASTE PROVISIONS

NTMWD requires all Member Cities and Customers prohibit activities that waste water. The main purpose of a water waste ordinance is to provide for a means to enforce that water waste is prevented during lawn and landscape irrigation, that water resources are conserved for their most beneficial and vital uses, and that public health is protected. It provides a defined enforcement mechanism for exceptional neglect related to the proper maintenance and efficient use of water fixtures, pipes, and irrigation systems. The ordinance can provide additional assistance or enforcement actions if no corrective action has been taken after a certain number of correspondences.

NTMWD ***requires*** that the following water waste ordinance offenses include:

1) The use of irrigation systems that water impervious surfaces. (Wind-driven water drift will be taken into consideration.)
2) Outdoor watering during precipitation or freeze events.
3) The use of poorly maintained sprinkler systems that waste water.
4) Excess water runoff or other obvious waste.
5) Overseeding, sodding, sprigging, broadcasting or plugging with cool season grasses or watering cool season grasses, except for golf courses and athletic fields.
6) The use of potable water to fill or refill residential, amenity, and any other natural or manmade ponds. A pond is considered to be a still body of water with a surface area of 500 square feet or more. This does not include recreational swimming pools.
7) Non-commercial car washing that does not use a water hose with an automatic shut-off valve.
8) Hotels and motels that do not offer a linen reuse water conservation option to customers.
9) Restaurants, bars, and other commercial food or beverage establishments provide drinking water to customers unless a specific request is made by the customer for drinking water.

8.03 ADDITIONAL CONSERVATION STRATEGIES

A. USE OF ET-BASED WEEKLY WATERING ADVICE/RECOMMENDATIONS

- ***Water My Yard*** – *An online platform where homeowners can sign up to receive weekly watering recommendations based on their location and a few specifications about their sprinkler system. Users can then choose to accept the recommendations by email, text, or both. Recommendations are available for select cities in Collin, Dallas, Denton,*

Fannin, Hunt, Kaufman, and Rockwall Counties. Sponsored by NTMWD and Texas A&M AgriLife Extension Service (WaterMyYard.org).

- ***City of Melissa Weekly e-Newsletter*** *– The City of Melissa (Melissa) provides weekly lawn watering advice on the city's website and through an e-newsletter.*

B. WATER EFFICIENT LANDSCAPE INITIATIVES

NTMWD recommends that Member Cities and Customers include water efficient landscape initiatives in their water conservation plans. A water efficient landscape is a landscape that is designed and maintained according to basic good horticultural principles that allow for a beautiful healthy landscape with minimal or no supplemental irrigation and no adverse runoff from the landscape property. Water efficient landscapes limit or exclude non-functional turf where possible. Examples of nonfunctional turf include streetscape turf and turf that is purely ornamental. As an alternative to non-functional turf grasses, water efficient landscapes use appropriate plants or other landscaping materials that require little or no supplemental irrigation. Appropriate plants are those selected based on their adaptability to the region's soil and climate. NTMWD's #PledgeToPlantSmart initiative seeks to inspire positive change in water conservation by encouraging North Texas residents to do their part and plant smart by selecting native or adaptive plants for their garden and landscaping. Member Cities and Customers should adopt a native and adaptive recommended plant list for water efficient landscaping. Water efficient landscapes can be an alternative to non-functional turf grasses and may be appropriate for application in new development or retrofits of existing landscapes for both commercial and residential areas.

Water efficient landscape initiatives can be encouraged through financial incentives or required through ordinance. Member Cities and Customers should also consider review of their existing requirements and removal of current codes that may impede or limit the application of water efficient landscapes. Texas Property Code § 202.007 may be a helpful resource for language for removing potential barriers to water efficient landscapes.

In lieu of an ordinance, water efficient landscapes can be encouraged through rebates for landscape conversion or installation or award programs. Good examples of water efficient landscapes should also be encouraged through public outreach, demonstration gardens, and/or used in public landscapes and rights-of-way. NTMWD has a great example of the implementation of native plants and xeriscaping at the Bois d'Arc Lake Operations Center.

There are several programs available that offer a wealth of information on designing and implementing water efficient landscape.

- Water Wise (http://urbanlandscapeguide.tamu.edu/waterwise.html)
- Texas SmartScape™ (http://www.txsmartscape.com/)

- EARTH-KIND™ (https://aggie-horticulture.tamu.edu/earthkind/publications/#water)

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

C. ADDITIONAL WATER SAVING MEASURES FOR NEW IRRIGATION SYSTEM REQUIREMENTS

NTMWD requires certain irrigation system requirements for new and commercial systems. However, this conservation practice can be improved with additional water savings measures. As discussed previously, Texas legislation regulates irrigation systems and irrigators by adopting minimum standards and specifications for designing, installing, and operating irrigation systems.

Many cities within Region C have adopted irrigation system standards above the minimum state requirements. Some of these standards include:

- *Require property owners who install their irrigation system to also comply with the adopted city ordinance.*
- *Require submission of the irrigation plan in conjunction with the permit application to the applicable city official/department.*
- *Require all new irrigation systems to not utilize above-ground spray in landscapes that are less than 60 inches in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. The use of subsurface or drip irrigation and pressure compensating tubing is permitted if the qualifying area is irrigated.*
- *Require all non-turf landscape areas included in the irrigation plan to be designed with subsurface irrigation, drip irrigation, and/or pressure compensating tubing. If the irrigation plan includes a foundation watering system, require a separate zone to be dedicated for drip irrigation for the purpose of watering a structure's foundation.*
- *Require a flow control master valve to be installed on the discharge side of the backflow prevention device on all new installations.*
- *Require check valves where elevation differences may result in low head drainage. Check valves may be located at the sprinkler head(s) or on the lateral line.*
- *Require that pop-up heads shall be installed at grade level and operated to extend above all landscape turfgrass.*
- *Require that all new irrigation systems must include an automatic controller capable of providing the following features:*

- *Multiple irrigation programs with at least three start times per program*
- *Limiting the irrigation frequency to once every 7 days and once every 14 days*
- *Water budgeting feature*

- *Require additional information and description for the required "walk-through". This may include but is not limited to a checklist of things to cover on the "walk-through" with the homeowner or educational leave behind materials.*
- *Require the signed maintenance checklist be submitted to the applicable city official/department. Require the irrigator's name, license number, company name, telephone number, and the dates of the warranty period to be on the maintenance checklist.*
- *Require the irrigation plan indicating the actual installation of the system and the associated seasonal watering schedule be submitted to the applicable city official/department.*
- *Require the irrigation plan and maintenance checklist be transferred from the new home builder to the first home buyer with documentation confirming the transaction provided to the applicable city official/department.*

It is important to note that, at a minimum, Member Cities and Customers must adhere to the irrigation system requirements set by NTMWD.

D. ADDITIONAL WATER WASTE PROVISIONS

NTMWD requires certain water waste provisions. However, this conservation practice can be improved with the inclusion of additional water waste provisions suited for your entity. As discussed previously, the main purpose of a water waste ordinance is to provide a means for enforcement that water waste is prevented during lawn and landscape irrigation, that water resources are conserved for their most beneficial and vital uses, and that public health is protected. It provides a defined enforcement mechanism for exceptional neglect related to the proper maintenance and efficient use of water fixtures, pipes, and irrigation systems. The ordinance can provide additional assistance or enforcement actions if no corrective action has been taken after a certain number of correspondences.

NTMWD ***recommends, but does not require****, the following additional water waste ordinance offenses:*

1) *Sprinkler runoff from a property greater than 50 feet.*

2) *Operating an irrigation system or other lawn watering device during any form of precipitation or when temperatures are below 32 degrees Fahrenheit.*

3) *Irrigation to pond in a street or parking lot to a depth greater than 1/4 inch.*

4) *Failure to repair a controllable leak, including but not limited to a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet.*

5) *Operating a permanently installed irrigation system with a broken head or a head that is out of adjustment where the arc of the spray head is over a street or parking lot.*

6) *Washing of driveways, sidewalks, parking lots or other impervious surface areas with an open hose or spray nozzle attached to an open hose, except when required to eliminate conditions that threaten public health, safety or welfare.*

7) *Installation of splash pads that use a flow-through system instead of a cycle tank.*

   All splash pads should follow the manufacturer's recommendations and health agency guidance for the operation and management of splash pads and have standard operating procedures that help ensure water quality and promote conservation. Standard operating procedures should be tailored to the type of splash-pad (flow-through or cycle tank). Regardless of splash pad type or configuration, consideration should be given towards conservation efforts. For example, operating hours could be adjusted often based on frequency and duration of public use or the runoff can be diverted to serve a functional purpose, such as maintaining native and adapted vegetation.

It is important to note that, at a minimum, Member Cities and Customers must adhere to the water waste provisions set by NTMWD.

E. PARK/ATHLETIC FIELD CONSERVATION

NTMWD recommends that Member Cities and Customers consider the implementation of this conservation practice if there are parks and/or athletic fields within their system that are heavy water users. This conservation practice is intended to address park and athletic field conservation if the water provider manages and/or serves customers with irrigated parks and/or athletic fields. These facilities often face scrutiny by the public for using large amounts of water or being perceived as using excessive amounts. Athletic field and park irrigation conservation practices and the careful use of water in the operation and maintenance of park facilities can effectively reduce water demands. Once a water provider or customer adopts this practice, it should be followed closely to achieve maximum water efficiency benefits. With the dedication of an athletic field manager, athletic field conservation can effectively reduce

system water demand. A manager can implement a watering regimen that only uses the amount of water necessary to maintain the viability of the turf and health of its users.

All park facilities should be metered, and water use billed to reinforce the importance of water efficiency. Before developing an efficient watering program, the water provider should consider meeting with parks irrigation personnel, management, and authorized landscape manager. This discussion should focus on water conservation issues and developing an adequate scope of action for efficiency. The first key is to understand the performance and capabilities of your irrigation system at these facilities. Requiring automatic irrigation systems and controllers at all facilities is recommended. It is essential to have training in soil management, proper aeration methods, nutrient management, mowing, soil testing, and irrigation management.

Achieving conservation can be voluntary or regulatory, based on the needs of the city. Cities may also consider if there is an opportunity to use reclaimed, reused, or recycled water for parks to conserve potable water. However, specific uses must meet TCEQ water quality standards for reclaimed water and human contact, and they must be appropriate for the particular use of the park. Reclaimed water should be applied based on the appropriate water budget. When developing athletic field conservation practices, identify the various stakeholders, including the school district staff, nonprofit athletic associations, private sports complex managers, and city staff. Meeting with them will help achieve long-term results.

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

F. GOLF COURSE CONSERVATION AND REUSE

NTMWD recommends that Member Cities and Customers consider the implementation of this conservation practice if there are golf courses within their system that are heavy water users. Golf courses can use a considerable amount of water for irrigation, especially during the summer. The Environmental Institute for Golf found that from 2003-2005, an 18-hole course in the southeast region of the country (including North Central Texas) applied an average of 29 inches of irrigation water per acre every year. Irrigation of course play areas, such as fairways, is necessary to support healthy turfgrass and landscape plants, which are important for course playability and aesthetics. However, golf courses can employ several practices to reduce water use while maintaining the course's playability and aesthetics. Also, overwatering and over-fertilization can negatively impact the water quality in local streams and lakes.

By adopting a conservation plan, golf courses can benefit by:

- *Being a good neighbor by conserving local water supplies*
- *Saving money by reducing water use*

- *Protecting local water quality*
- *Maintaining playing conditions on the course*
- *Increasing irrigation equipment longevity*

Water providers may take different golf course conservation approaches: encouraging voluntary efforts by the golf courses to conserve water, making it required as part of a contract, or, if possible, passing an ordinance requiring golf courses to develop and implement a conservation plan. It is important for water providers to work closely with golf courses since they know which practices will have the greatest potential for implementation. The courses may have already completed some best management practices and knowledge which may be effective or not. Water providers should work to coordinate and implement conservation practices on courses that are owned and operated by the local government.

Water conservation and water quality protection measures for golf courses may include, but are not limited to, the following:

Golf Course Landscape Design and Water Sources

- *When feasible, use alternative water sources, such as reclaimed or reuse water from wastewater treatment facilities, to supplement or replace potable water sources. Monitor reclaimed water tests regularly for salinity. Rainwater harvesting and on-site pond storage are additional alternative water sources to consider.*
- *Select drought-tolerant turfgrass varieties to minimize water use while maintaining a high-quality playing surface.*
- *Reduce the number of irrigated acres on the course by converting non-play and rough areas to native grasses and other drought-tolerant plants. These plants will provide an attractive and low-maintenance landscape.*
- *Reduce water use by limiting the number and/or size of water features that only serve an aesthetic function.*
- *Develop a drought management plan that can be implemented when water supplies are low enough to enact local drought mitigation efforts.*

Irrigation System Design and Maintenance

- *Irrigation systems should be properly designed and installed to maximize water use efficiency while reducing operational costs and maintaining a healthy and playable course.*

- *Utilize new technology, such as soil moisture sensors, evapotranspiration data, and computer-controlled systems that maximize water efficiency by irrigating based on the turfgrass's moisture needs.*
- *Hand watering greens or other smaller areas will save water compared to running the entire zone in that area.*
- *Design the irrigation system to ensure that the irrigation water is distributed evenly and efficiently, with a Distribution Uniformity of 80% or better.*
- *Frequently inspect all sprinkler heads and other components of the irrigation system and make any adjustments or repairs as needed to improve water use efficiency. Conducting a system-wide audit by a licensed irrigation professional annually can help identify inefficiencies in the system.*
- *Fix leaks in the system immediately.*
- *Rain sensors can shut off the irrigation system when an adequate amount of rainfall is received.*
- *Irrigating in the early morning hours before temperatures rise and when wind speeds are low will reduce the amount of water lost to evaporation.*
- *Use mowing, aeration, nutrients, and soil amendments to improve soil condition and increase water infiltration.*

Water Quality Protection

- *Obtain a soil test before applying fertilizer to ensure the correct type and amount is used.*
- *Apply fertilizers and chemicals according to the directions on the label. Do not overapply.*
- *Do not overwater fertilizers when applying, resulting in runoff that could carry fertilizers into a nearby stream or pond.*
- *Maintain vegetated buffers at least 15 feet from the edge of a stream or pond to capture pollutants that may runoff from the course.*

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

G. USE OF LICENSED IRRIGATORS TO INSPECT AND REVIEW ALL IRRIGATION PERMITS AND PLANS

Another potential conservation practice to implement is the requirement of licensed irrigation inspectors to review and inspect all irrigation system plans and installed components before a permit is released. Many cities use licensed plumbing inspectors, as allowed by TCEQ rules, to perform these duties. However, having dedicated licensed irrigation inspectors to implement all aspects of an irrigation system permitting program provides a certain level of focus for complying with water efficiency standards. Reviewing irrigation permits and plans before installing allows for changes to be made to the plans and not after the pipe is already in the ground. This ensures the irrigation system's overall quality, promotes irrigation efficiency and guarantees that the system will comply with state and local requirements.

Developing a review and inspection program at the municipal level reduces the chance for unlicensed irrigators to install irrigation systems improperly. Improper installation can waste water, money, cause future maintenance issues, but most importantly, it may contaminate the public water supply. It is crucial to prevent non-potable water in lawn irrigation pipes from flowing into public water supply pipes.

Inspecting the system provides benefits for water conservation. With open-trench inspections, you can check:

- *Depth of piping-which protects from freezing temperatures.*
- *Potential invasion of plant/shrubbery roots.*
- *Joints are glued appropriately, and no leaks occur.*
- *Pipe size-to eliminate water hammer.*
- *Pressure management requirements.*
- *The overall layout of the system.*

Staff can hold an irrigator's license and inspector's license, but to prevent them from installing and inspecting their work, staff can't have both running concurrently. In 2011, the 82nd Texas Legislature passed House Bill 2507, making it a Class C misdemeanor for an individual to operate as an irrigator in the state of Texas without a valid irrigation license. Therefore, effective September 1, 2011, individuals operating without a license are in direct violation of the Texas Occupational Code, Sec. 1903.256.

According to the Texas Administrative Code, upon completion of the irrigation system, four items must be completed to inform and educate the owner of the system: a final walk-through, a maintenance checklist, licensed irrigator contact information, and an as-built plan. All irrigation system plans, installation, and review requirements must be followed for long-term

water efficiency. Minimum state requirements for Landscape Irrigation can be found in Title 30, Chapter 344 of the Texas Administrative Code.

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

H. OFFER FREE OR DISCOUNTED IRRIGATION SYSTEM CHECK-UPS FOR RESIDENTIAL CUSTOMERS

EPA estimates that up to 70% of the total water used during the summer months is applied as outdoor irrigation. As much as 50% of the water used outdoors is wasted due to overwatering and inefficient or malfunctioning irrigation system components. Irrigation system check-ups (also known as evaluations or audits) for residential customers, is a tool that cities can employ to reduce outdoor watering demand. Check-ups are typically offered at no charge to homeowners. A licensed irrigator will evaluate the irrigation system components and controller settings during a typical check-up to see if the irrigation system can operate more efficiently and identify needed repairs or adjustments. The licensed irrigator will run the irrigation system to see if the sprinkler heads function correctly and apply water only to the intended areas. The licensed irrigator will check the irrigation system's pressure and discuss the controller settings with the homeowner to advise them on the most efficient watering methods.

One valuable aspect of check-ups is the one-on-one assistance and education that a residential customer receives on properly managing the irrigation system. This education can result in long-term water savings because the customer has a better understanding of the system. Water savings may last for multiple years after the evaluation is completed, mainly due to more efficient watering habits. As part of the check-up, the licensed irrigator will identify inefficiencies in the resident's irrigation system and educate them on programming the irrigation controller for more efficient watering practices, such as seasonal adjustment settings and 'Cycle and Soak.' The sponsoring water provider or city can also offer handouts, brochures, and other educational information to residents. The licensed irrigator can provide a report to the residential customer detailing equipment problems and offer recommendations to change watering habits. Reports can include an estimated water savings amount based on recommended adjustments to the controller's run times. The licensed irrigator should also provide a copy of the report to the sponsoring water provider or city.

Benefits of check-ups include one-on-one contact with residential customers, providing educational information that may result in greater water savings than irrigation system fixes alone. Check-ups are an excellent customer service tool when managing residents' complaints. When using check-ups, cities can be selective by targeting high water users or those with large lots to maximize budget and water savings. Water providers or cities should consider

conducting a customer satisfaction survey after the check-up is completed to determine how many residents have implemented recommended modifications and gauge satisfaction with the check-up program.

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

I. REBATES

NTMWD recommends that Member Cities and Customers consider offering a rebate program as a conservation practice to be included as part of their water conservation plan. As the population increases in the North Texas region, the demand for water grows, especially because many newer cities require irrigation systems in new developments.

Creating a program that encourages residents to become educated on their irrigation system can improve operation and efficiency. Furthermore, when it comes to the type of irrigation system and standard efficiencies, the Texas AgriLife Research and Extension Urban Solutions Center provides the following average efficiencies by system type:

- *Surface/Subsurface drip – 90%*
- *Surface micro drip irrigation – 85%*
- *Large Rotors – 70%*
- *Small Rotors – 65%*
- *Spray Heads – 50%*

This conservation practice of a rebate program provides, in conjunction with a sprinkler evaluation (check-up) program, an incentive to have an evaluation done and make recommended changes. With such a substantial opportunity for efficiency gains, some entities may wish to consider offering rebates to both residential and commercial customers for upgrading their current irrigation systems. By changing out less efficient equipment, this conservation practice intends to increase the irrigation efficiency by 10% or more. With 31% of all residential water use statewide attributed to irrigation, and most of that conducted using spray heads with an average efficiency of 50%, there is a real benefit for developing a rebate program for irrigation systems.

Although rebates for irrigation systems can have large impacts, there are also several other water conservation incentive programs that can be implemented. Other examples include:

- *Commercial clothes washer rebates for the purchase and installation of high efficiency card- or coin-operated commercial clothes washers.*

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

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

J. ICIM RECOMMENDATIONS

NTMWD has partnered with Plummer Associates, Inc. to develop the ICIM program to identify where additional ICIM water savings can be achieved. Member Cities and Customers can adopt a similar approach by implementing the following conservation practices:

- ***Classification of Customers by Specific End Use** - A billing system that identifies customers by criteria specific enough to assess usage patterns can greatly assist in reviewing drivers of demand and developing targeted conservation efforts. For example, rather than identify customers as residential, commercial, industrial, or institutional, which is very broad, utilities can classify customers by specific end uses such as Veterinary Hospitals, Full-Service Hotels, or Day Care Centers.*
- ***End Use Analysis** - In order to determine what water conservation and efficiency programs and policies will be most effective in managing demand, a water utility needs to understand the makeup of its customer base and conduct a thorough assessment of end use water efficiency measures. Understanding what technologies are available, understanding how far along end users are in adopting these new technologies, and understanding the potential impacts to long-term water use trends, allow planners to target the most effective drivers of change.*
- ***Benchmarking** - As businesses grow, they tend to add more customers and productions. As such, it can be difficult to see the benefit of targeted conservation efforts if you are only looking at the total annual water use. Development of effective*

and meaningful benchmarking, such as gallons per pound of product, gallons per guest per day, gallons per meal, etc., allows end users to gauge their effectiveness in using water and energy efficiently by providing measures that are easy to define and allow for comparison amongst piers. Additionally, benchmarking allows end users to gauge the effectiveness of their efforts year over year.

- ***Providing Water Efficiency Opportunity Surveys for ICIM Customers*** *- A detailed water efficiency survey can enable end users to understand how they use water, develop a complete inventory of water using equipment and processes, identify potential leaks and losses, set realistic reduction goals, identify and implement useful policies, identify low cost/no cost projects and assess potential investments in significant projects aimed at reducing long-term water demand. Members can reach out to NTMWD to participate in the ongoing Water Efficiency Opportunity Surveys.*

NTMWD recommends but does not require implementation of this conservation practice in Member Cities and Customers' own water conservation plans. NTMWD recommends that all Member Cities' and Customers participate in the ICIM program and takes advantage of the Water Efficiency Opportunity Surveys.

K. WATER EFFICIENCY OUTREACH PROGRAM

NTMWD provides a wealth of technical assistance and outreach. Wholesale and retail water providers benefit from a consistent water conservation message across multiple cities and can enhance their reputation in the community. Utilizing resources and programs from NTMWD's conservation portal allows Member Cities and Customers to save money by not producing the resources or operating the programs themselves and amplifies a common message. Outreach assistance from NTMWD accomplishes public outreach and education elements in both the wholesale and retail water providers respective water conservation plans.

However, it is recommended that each member city and customer develop their own water efficiency outreach program as well. Perhaps one of the most important actions a utility can take in increasing water use efficiency among its customers is through public education and outreach programs (E&O). The goal of E&O programs is to influence behavioral change for short and long-term water savings. Regular and consistent messaging in customer education will provide an overall picture of water resources in the community. Communicating the need for conservation helps manage existing water supplies and avoids or delays the need for expanded or new infrastructure to meet increased water demands. Customer education also provides valuable information on specific actions they can take in their home or business to meet these community goals while also benefiting from them personally (i.e., managing their water bill).

Each utility should develop an education and outreach plan suited to their community that is adaptable over time. Understanding which messages need to be conveyed regularly and identifying the target audience(s) is key to a successful program. An effective public education program will help develop trust between the community and the utility as relevant, timely, and fact-based information is provided, and customer service is enhanced.

Many cities have dedicated water conservation web pages located within the main city or utility website that provide tips and other resources. TWDB is one source that provides publications and other materials that can be placed online or made available in city/utility buildings. NTMWD's online conservation portal is another. The various education and outreach tools also allow cities to promote other programs offered, such as rebates or events, and to communicate other important messages, such as drought conditions or water service outages.

Some customers prefer to learn in a classroom setting or to tour facilities or demonstration areas to better understand certain conservation techniques. Offering in-person or virtual classes or workshops provides an opportunity to connect with these customers, provides hands-on experience, and allows questions on a range of conservation issues to be answered. NTMWD offers several programs such as these described in ***Section 8.02.***

NTMWD recommends but does not require implementation of this conservation practice in Member Cities' and Customers' own water conservation plans.

2024 Water Resource and Emergency Management Plan

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 TCEQ every five years.

1.00 INTRODUCTION

City of Melissa is a Customer of the North Texas Municipal Water District (NTMWD). This Plan was developed following TCEQ guidelines and requirements governing the development of drought contingency plans.

The goal of the water resource and emergency management plan is to prepare for potential water shortages and to preserve water for essential uses and the protection of public health. The objectives to achieve this goal are as follows:

- To save water during droughts, water shortages, and emergencies.
- To save water for domestic use, sanitation, and fire protection.
- To protect and preserve public health, welfare, and safety.
- To reduce the adverse impacts of shortages.
- To reduce the adverse impacts of emergency water supply conditions.

Note: NTMWD refers to their drought contingency plan (DCP) as the water resource and emergency management plan (WREMP) and should be considered synonymous with a DCP.

1.01 MINIMUM REGULATORY REQUIREMENTS

A drought contingency plan is defined as “a strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies”. Recognizing the need for efficient use of existing water supplies, 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 described in **Appendix B.**

2.00 IMPLEMENTATION AND ENFORCEMENT

2.01 PROVISIONS TO INFORM THE PUBLIC AND OPPORTUNITY FOR INPUT

City of Melissa provided opportunity for public input in the development of this Plan by the following means:

- Providing written notice of the proposed Plan and the opportunity to comment on the Plan by posted notice.
- Posting the draft Plan on the community website.
- Providing the draft Plan to anyone requesting a copy.

- Holding a public meeting regarding the Plan on 4/9/2024. Public notice of this meeting was provided on the community website and by posted notice.
- Approving the Plan at a public City Council meeting on 4/9/2024. Public notices of this meeting were provided on the community website and recorded audio and meeting minutes were available after the meeting.

2.02 PROGRAM FOR CONTINUING PUBLIC EDUCATION AND INFORMATION

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

- Preparing a bulletin 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, City of Melissa will notify local media 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 F 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

A. 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:

- The public will be notified through local media and the supplier's website.

- Wholesale customers and NTMWD will be notified by email that provides details of the reasons for initiation of the water resource management stage.
- If any mandatory provisions of the Plan are activated, City of Melissa will notify TCEQ and the NTMWD Executive Director within five business days. Instructions to report drought contingency plan water use restrictions to TCEQ is available online at https://www.tceq.texas.gov/drinkingwater/homeland_security/security_pws.

B. TERMINATION OF A WATER RESOURCE MANAGEMENT STAGE

Water resource management stages initiated by NTMWD may be terminated after NTMWD has terminated the stage. For stages initiated by the City Manager, they may order the termination of a water resource management stage when the conditions for termination are met or at their discretion.

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

- The public will be notified through local media and the supplier's website.
- Wholesale customers and NTMWD will be notified by email.
- If any mandatory provisions of the Plan that have been activated are terminated, City of Melissa will notify TCEQ Executive Director and the NTMWD Executive Director within five business days. Instructions to report drought contingency plan water use restrictions to TCEQ is available online at https://www.tceq.texas.gov/drinkingwater/homeland_security/security_pws.

The City Manager may decide not to order the termination of a water resource management stage even though the conditions for termination of the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of potentially changed conditions that warrant the continuation of the water resource management stage. The reason for this decision should be documented.

2.05 PROCEDURE FOR GRANTING VARIANCES TO THE PLAN

The City Manager may grant temporary variances for existing water uses otherwise prohibited under this Plan if one or more of the following conditions are met:

- Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the person or entity requesting the variance.
- Compliance with this Plan cannot be accomplished due to technical or other limitations.

- 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 enforces mandatory water use restrictions with its typical Code Enforcement process. The City's current Water Resource and Emergency Management Plan was adopted by Ordinance No. 19-17, which has the penalty language below.
"Penalty. Any customer, as defined by 30 TEX. ADMIN. CODE Chapter 291, failing to comply with the provisions of the Plan shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined a sum not exceeding TWO THOUSAND AND 00/100 DOLLARS ($2,000.00) per day per occurrence and/or discontinuance of water service by Melissa. 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. Melissa's authority to seek injunctive or other civil relief available under the law is not limited by this section. Melissa retains all legal rights and remedies available to it pursuant to local, state and federal law."

2.07 REVIEW AND UPDATE OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

As required by TCEQ rules, City of Melissa must review their respective Plan every five years. The plan will be updated as appropriate based on new or updated information.

3.00 WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

Initiation and termination criteria for water management stages include general, demand, supply, and emergency criteria. One of the major indicators of approaching or ongoing drought conditions is NTMWD's combined reservoir storage, defined as storage at Lavon Lake plus storage in Bois d'Arc Lake. Percent storage is determined by dividing the current storage by the total conservation storage when the lakes are full. **Table 1** summarizes the water management stages by triggers based on percent combined storage and associated demand reduction goals and outdoor watering restrictions. The following sections go into more detail on the three water management stages.

TCEQ requires notification when mandatory restrictions are placed on a customer. NTMWD must notify TCEQ when they impose mandatory restrictions on Member Cities and Customers. Member Cities and Customers must likewise notify TCEQ when they impose mandatory restrictions on their customers (wholesale or retail). Measures that impose mandatory requirements on customers are denoted with **"requires notification to TCEQ"**.

NTMWD and the utilities must notify TCEQ within five business days if these measures are implemented (https://www.tceq.texas.gov/response/drought/drought-and-public-water-systems).

Table 2: Water Management Plan Stages Summary

Drought Stage		April to October	November to March	Demand Reduction Goal	Outdoor Watering Restrictions
		Percent Combined Storage			
Stage 1	Initiation	70%	60%	2%	2X per week (Apr-Oct) 1X per week (Nov-Mar)
	Termination	75%	65%		
Stage 2	Initiation	55%	45%	5%	1X per week (Apr-Oct) 1X every other week (Nov-Mar)
	Termination	70%	60%		
Stage 3	Initiation	30%	20%	30%	No outdoor watering
	Termination	55%	45%		

3.01 WATER RESOURCE MANAGEMENT – STAGE 1

A. 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**

  - The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 1.
  - The circumstances that caused the initiation of Stage 1 no longer prevail.

- **Supply Criteria**
  - The combined storage in Lavon and Bois d'Arc Lakes, as published by the TWDB, is greater than:
    - 75% of the combined conservation pool capacity during any of the months of April through October
    - 65% of the combined conservation pool capacity during any of the months of November through March

B. GOAL FOR USE REDUCTION UNDER STAGE 1

The goal for water use reduction under Stage 1 is an annual reduction of 2% in the use that would have occurred in the absence of water management measures. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 5% in summer to achieve an annual savings goal of 2%. **If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

C. WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 1

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 1.

- **Requires notification to TCEQ by NTMWD.** Require Member Cities and Customers (including indirect Customers) to initiate Stage 1 restrictions in their respective, independently adopted water resource management plans.
- Continue actions described in the water conservation plan.
- Increase enforcement of landscape watering restrictions from the water conservation plan.
- Initiate engineering studies to evaluate alternative actions that can be implemented if conditions worsen.
- Accelerate public education efforts on ways to reduce water use.
- Halt non-essential NTMWD water use.
- Encourage the public to wait until the current drought or water emergency situation has passed before establishing new landscaping.
- Encourage all users to reduce the frequency of draining and refilling swimming pools.

- **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

A. 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.

- NTMWD is concerned that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, and/or some other NTMWD water source may be limited in availability within the next three months.

Stage 2 may terminate 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 termination of Stage 2.
  - The circumstances that caused the initiation of Stage 2 no longer prevail.
- **Supply Criteria**
  - The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is greater 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

B. GOAL FOR USE REDUCTION UNDER STAGE 2

The goal for water use reduction under Stage 2 is an annual reduction of 5% in the use that would have occurred in the absence of water resource management measures. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 5% in summer to achieve an annual savings goal of 5%. **If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

C. WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 2

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 2.

- Continue or initiate any actions available under the water conservation plan and Stage 1.
- Implement viable alternative water supply strategies.
- **Requires notification to TCEQ by NTMWD.** Require Member Cities and Customers (including indirect Customers) to initiate Stage 2 restrictions in their respective, independently adopted water resource management plans.
- **Requires notification to TCEQ by NTMWD and/or Member Cities and Customers.** Limit landscape watering with sprinklers or irrigation systems at each service address to once per week on designated days between April 1 and October 31. Limit landscape

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

A. INITIATION AND TERMINATION CRITERIA FOR STAGE 3

NTMWD has initiated Stage 3, 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 3.
    - 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 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
        - 30% of the combined conservation pool capacity during any of the months of April through October
        - 20% 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 drought and have significantly reduced supplies available to NTMWD.
- The supply from Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, and/or some other NTMWD water source has become limited in availability.

Stage 3 may terminate 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 termination of 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

B. 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.**

C. 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.

- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit the use of potable water for the irrigation of new landscape.
- **Requires notification to TCEQ by NTMWD and/or Member Cities and Customers.** Prohibit all commercial and residential landscape watering, except foundations (within 2 feet) and trees (within a 10-foot radius of its trunk) may be watered for two hours one day per week with a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs. Drip irrigation systems are not exempt from this requirement.
- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit washing of vehicles except at a commercial vehicle wash facility.
- **Requires notification to TCEQ by Member Cities and Customers.** Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. As an exception, golf course greens and tee boxes may be hand watered as needed. Variances may be granted by the water provider under special circumstances.
- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit the filling, draining, and/or refilling of existing swimming pools, wading pools, Jacuzzi and hot tubs except to maintain structural integrity, proper operation and maintenance or to alleviate a public safety risk. Existing pools may add water to replace losses from normal use and evaporation. Permitting of new swimming pools, wading pools, Jacuzzi and hot tubs is prohibited.
- **Requires notification to TCEQ by Member Cities and Customers.** Prohibit the operation of interactive water features such as water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, inflatable pools, temporary splash toys or pools, slip-n-slides, or splash pads that are maintained for recreation.
- **Requires notification to TCEQ by Member Cities and Customers.** Require all commercial water users to reduce water use by a set percentage.
- **Requires notification to TCEQ by NTMWD.** Institute a mandated reduction in deliveries to all Member Cities and Customers. Such a reduction will be distributed as required by Texas Water Code Section 11.039.
- **Requires notification to TCEQ by NTMWD and/or Member Cities and Customers.** Initiate a rate surcharge over normal rates for all water use or for water use over a certain level

Appendix A
List of References

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

APPENDIX A

LIST OF REFERENCES

1. Texas Commission on Environmental Quality Water Conservation Implementation Report. https://www.tceq.texas.gov/assets/public/permitting/forms/20645.pdf

2. Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.5, and Subchapter B, Rule 288.22, downloaded from http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288, April 2023.

3. Water Conservation Implementation Task Force: "Texas Water Development Board Report 362, Water Conservation Best Management Practices Guide," prepared for the Texas Water Development Board, Austin, November 2004.

4. Texas Water Development Board, Texas Commission on Environmental Quality, Water Conservation Advisory Council: Guidance and Methodology for Reporting on Water Conservation and Water Use, December 2012

5. Freese and Nichols, Inc.: Model Water Conservation Plan for NTMWD Members Cities and Customers, prepared for the North Texas Municipal Water District, Fort Worth, January 2019.

6. Freese and Nichols, Inc.: Model Water Resource and Emergency Management Plan for NTMWD Members Cities and Customers, prepared for the North Texas Municipal Water District, Fort Worth, January 2019.

7. Freese and Nichols Inc, Alan Plummer Associates, Inc., CP & Y Inc., Cooksey Communications. "2021 Region C Water Plan"

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.

APPENDIX B

TEXAS ADMINISTRATIVE CODE TITLE 30 CHAPTER 288

TCEQ rules governing development of water conservation plans are contained in Title 30, Chapter 288, Subchapter A of the Texas Administrative Code, which is included in this Appendix for reference.

The water conservation plan elements required by TCEQ water conservation rules that are covered in this water conservation plan are listed below.

Minimum Conservation Plan Requirements for Public Water Suppliers

- 288.2(a)(1)(A) – Utility Profile – Section 2
- 288.2(a)(1)(B) – Record Management System – Section 4
- 288.2(a)(1)(C) – Specific, Quantified Goals – Section 3
- 288.2(a)(1)(D) – Accurate Metering – Section 4
- 288.2(a)(1)(E) – Universal Metering – Section 4
- 288.2(a)(1)(F) – Determination and Control of Water Loss – Section 4
- 288.2(a)(1)(G) – Public Education and Information Program – Section 8
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 8
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 6
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 7
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 7
- 288.2(c) – Review and Update of Plan – Section 7

Additional Requirements for Public Water Suppliers (Population over 5,000)

- *288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Section 4*
- *288.2(a)(2)(B) – Requirement for Water Conservation Plans by Wholesale Customers – Section 5*

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, 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 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 nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(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) 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 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.

(26) 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 be effective January 10, 2008, 33 TexReg 193; amended to be effective December 6, 2012, 37 TexReg 9515; amended to be effective August 16, 2018, 43 TexReg 5218

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;

(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 operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(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

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

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 of 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

TEXAS ADMINISTRATIVE CODE TITLE 30 CHAPTER 288

TCEQ rules governing development of water conservation plans are contained in Title 30, Chapter 288, Subchapter A of the Texas Administrative Code, which is included in this Appendix for reference.

The water conservation plan elements required by TCEQ water conservation rules that are covered in this drought contingency plan are listed below.

Minimum Drought Contingency Plan Requirements for Public Water Suppliers

- **288.20(a)(1)(A)** – Provisions to Inform Public and Provide Opportunity for Public Input - Section 2
- **288.20(a)(1)(B)** – Program for Continuing Public Education and Information – Section 2
- **288.20(a)(1)(C)** –Coordination with Regional Water Planning Groups – Section 2
- **288.20(a)(1)(D)** – Description of Information to Be Monitored and Criteria for the Initiation and Termination of Water Resource Management Stages – Sections 2
- **288.20(a)(1)(E)** – Stages for Implementation of Measures in Response to Situations – Section 3
- **288.20(a)(1)(F)** – Specific, Quantified Targets for Water Use Reductions During Water Shortages – Section 3
- **288.20(a)(1)(G)** – Specific Water Supply or Water Demand Measures to Be Implemented at Each Stage of the Plan – Section 3
- **288.20(a)(1)(H)** – Procedures for Initiation and Termination of Drought Contingency and Water Emergency Response Stages – Section 2
- **288.20(a)(1)(I)** – Description of Procedures to Be Followed for Granting Variances to the Plan – Section 2
- **288.20(a)(1)(J)** – Procedures for Enforcement of Mandatory Water Use Restrictions – Section 2
- **288.20(b)** – TCEQ Notification of Implementation of Mandatory Provisions – Sections 2 and 3
- **288.20(c)** – Review of Drought Contingency and Water Emergency Response Plan Every Five (5) Years – Section 2

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;

(iii) supply source contamination; or

(iv) system outage due to the failure or damage of major water system components (e.g., pumps).

(F) 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 subparagraph are not enforceable.

(G) 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:

(i) curtailment of non-essential water uses; and

(ii) utilization of alternative water sources and/or alternative delivery mechanisms 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.).

(H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

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

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(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

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 §288.22	**Drought Contingency Plans for Wholesale Water Suppliers**

(a) A drought contingency plan for a wholesale water supplier must include the following minimum elements.

(1) Preparation of the plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the plan and for informing wholesale customers about the plan. 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.

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

(3) 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.

(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.

(10) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions including specification of penalties (e.g., liquidated damages, water rate surcharges, discontinuation of service) for violations of such restrictions.

(b) The wholesale public water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(c) The wholesale 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 adoption or revision of the regional water plan.

Source Note: The provisions of this §288.22 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

Appendix C
TCEQ Water Utility Profile

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

Texas Commission on Environmental Quality
Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4600, FAX (512) 239-2214

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

This form is provided to assist retail public water suppliers in water conservation plan assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

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

Contact Information

Name of Water Supplier:	City of Melissa
Address:	3411 Barker Avenue / Melissa, TX 75454
Telephone Number:	(972)838-2338 Fax: (972)837-4524
Water Right No.(s):	See attached CCN Maps
Regional Water Planning Group:	C
Water Conservation Coordinator (or person responsible for implementing conservation program):	Bridget Saxton Phone: (972)838-1380
Form Completed by:	Tyler Brewer
Title:	Executive Director of Development
Signature:	Date: 04/03/2024

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

Utility Profile

I. POPULATION AND CUSTOMER DATA

A. Population and Service Area Data

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

2. Service area size (in square miles):

   Water - 26 Wastewater - 16

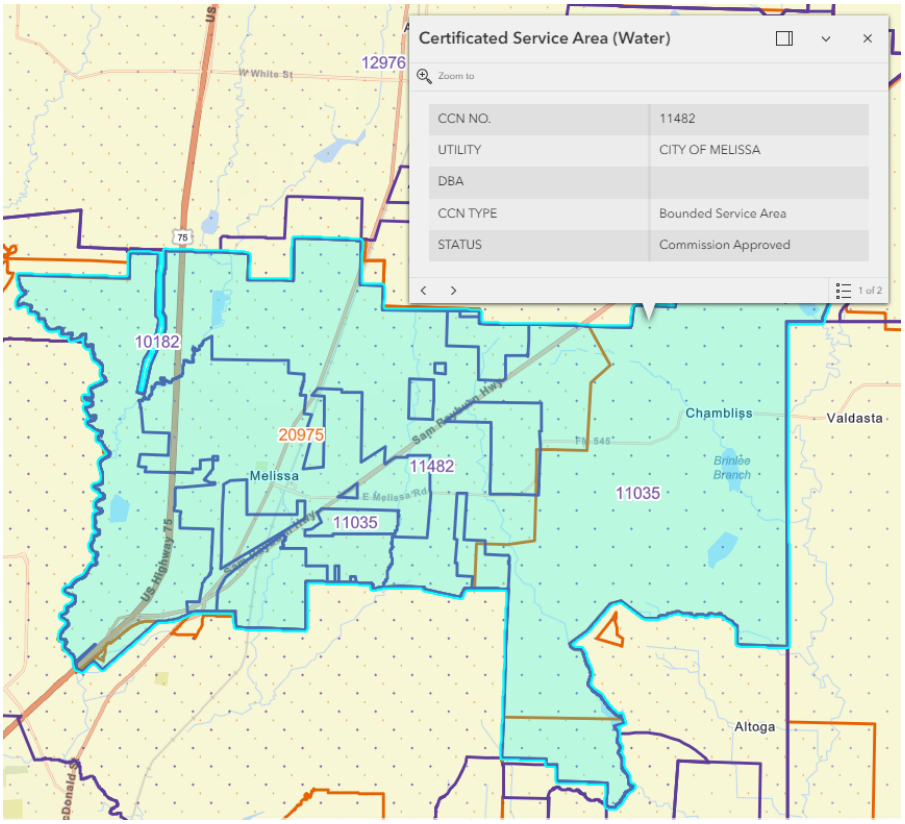
   (Please attach a copy of service-area map)

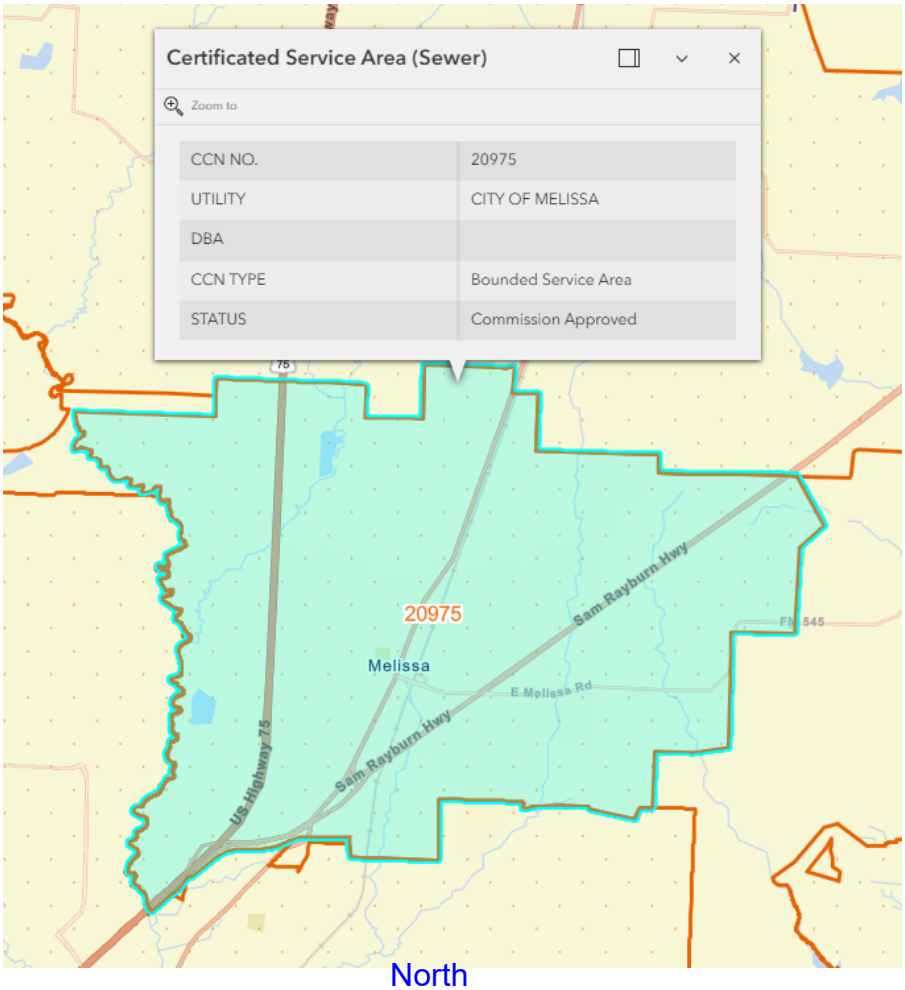
3. Current population of service area: 26,211

4. Current population served for:

   a. Water: 26,211

   b. Wastewater: 25,033


Certificated Service Area (Water)
Zoom to
CCN NO. 11482
UTILITY CITY OF MELISSA
DBA
CCN TYPE Bounded Service Area
STATUS Commission Approved
1 of 2
12976
10182
20975
11482
11035
Melissa
Chambliss
Valdasta
Altoga
W White St
E Melissa Rd
US Highway 75
Sam Rayburn Hwy
FM 545
Brinlee Branch


Certificated Service Area (Sewer)
Zoom to
CCN NO. 20975
UTILITY CITY OF MELISSA
DBA
CCN TYPE Bounded Service Area
STATUS Commission Approved
20975
Melissa
US Highway 75
Sam Rayburn Hwy
E Melissa Rd
FM 545

North

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 29, 2008

CERTIFIED MAIL

Mr. Ronald J. Freeman
Freeman & Corbett, LLP
8500 Bluffstone Cove, Suite B-104
Austin, Texas 78759

Re: Application from the City of Melissa, Certificate of Convenience and Necessity (CCN) No. 11482, to Purchase Facilities and to Transfer CCN No. 11935 from Country Ridge Water Company, LLC, in Collin County; Application No. 35253-S

CN: 600661193; RN: 102690526

Dear Mr. Freeman:

We have reviewed the above referenced application.

ENCLOSED ARE:

- CONSENT FORM
- The proposed map, certificate, and staff recommendation.
- A pamphlet explaining how to obtain a copy of Commission rules.
- Information Order Form which lists all forms and other information available for your use.

YOU SHOULD DO THE FOLLOWING:

- Review the map, certificate, and recommendation. If these documents are **accurate and you agree** with all of the provisions of the order, you must sign the **CONSENT FORM** and mark the line that says you concur and return the signed statement. You should keep a copy of the letter you signed along with the documents listed above for your records. Failure to return the signed statement could result in your application being returned.
- Notify us **(in writing) within 14 days of** the date of this letter, **if** these documents are **inaccurate or you disagree** with any of the provision of the order. You may do this by marking the line on the **CONSENT FORM** that says you do not concur, signing the form and mailing it to the address on the form.
- **NOTE:** This letter does not authorize you to provide utility service. You must wait until the Commission has approved your application and issued the CCN.

WE WILL DO THE FOLLOWING:

- Submit the order for this application to the Executive Director for signature. However, before the Executive Director can sign the order, we **must** receive your written consent to the staff's recommendation.
- **After your signed CONSENT FORM is received,** submit your application and the staff recommendation to the Executive Director for approval on behalf of the Commission.
- Mail you a signed copy of the order and CCN after it has been approved.

After you receive the signed order and CCN, you are authorized to provide utility service. Your last step is to file a certified copy of the CCN map along with a written description of the CCN service area in the county clerk's office pursuant to Texas Water Code, Chapter 13.257(r) and (s).

If you have any questions, please contact Mr. Brian Dickey by phone at 512/239-0963, by fax at 512/239-0030, or if by correspondence, include MC 153 in the letterhead address.

Sincerely,

Dan Smith for

Tammy Benter, Team Leader
Utilities & Districts Section
Water Supply Division
Texas Commission on Environmental Quality

THB/VP/BDD/AS

Enclosures

Texas Commission On Environmental Quality

By These Presents Be It Known To All That

City of Melissa

having duly applied for certification to provide water utility service for the convenience and necessity of the public, and it having been determined by this commission that the public convenience and necessity would in fact be advanced by the provision of such service by this Applicant, is entitled to and is hereby granted this

Certificate of Convenience and Necessity No. 11482

to provide continuous and adequate water utility service to that service area or those service areas in Collin County as by final Order or Orders duly entered by this Commission, which Order or Orders resulting from Application No. 35253-S are on file at the Commission offices in Austin, Texas; and are matters of official record available for public inspection; and be it known further that these presents do evidence the authority and the duty of the City of Melissa to provide such utility service in accordance with the laws of this State and Rules of this Commission, subject only to any power and responsibility of this Commission to revoke or amend this Certificate in whole or in part upon a subsequent showing that the public convenience and necessity would be better served thereby.

Issued at Austin, Texas, this _____

_____

For the Commission

CANCELLATION OF
CERTIFICATE OF CONVENIENCE AND NECESSITY

To Provide Water Service Under V.T.C.A., Water Code
and Texas Commission on Environmental Quality Substantive Rules

Certificate No. 11935

Certificate No. 11935 was canceled by Order of the Commission in Docket No. 35253-S. Country Ridge Water Company, LLC's facilities and lines were transferred to the City of Melissa CCN No. 11482 in Collin County.

Please reference Certificate No. 11482 for the location of maps and other information related to the service area transferred.

Certificate of Convenience and Necessity No. 11935 is hereby CANCELED by order of the Texas Commission on Environmental Quality.

Issued Date:_____

_____
For the Commission

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPLICATION NO. 35253-S

IN THE MATTER OF THE APPLICATION OF THE CITY OF MELISSA, CERTIFICATE OF CONVENIENCE AND NECESSITY NO. 11482, TO PURCHASE FACILITIES, TRANSFER, AND CANCEL CERTIFICATE OF CONVENIENCE AND NECESSITY NO. 11935 FROM COUNTRY RIDGE WATER COMPANY LLC IN COLLIN COUNTY, TEXAS	§ § § § § § § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

On _____, the Executive Director of the Texas Commission on Environmental Quality pursuant to Chapters 5 and 13 of the Texas Water Code considered the application of the City of Melissa, Certificate of Convenience and Necessity No. 11482, to purchase facilities, transfer and cancel Certificate of Convenience and Necessity No. 11935 from Country Ridge Water Company, LLC in Collin County, Texas.

No person has requested a public hearing on the application;

Notice of the application was given to all affected and interested parties;

The criteria set forth in *Texas Water Code* Sections 13.246(c), 13.254, and 13.301 have been considered; and

The certificates amendment and cancellation requested in this application are necessary for the service, accommodation, convenience, and safety of the public.

Now, therefore, be it ordered by the Texas Commission on Environmental Quality that the application is granted and Certificate of Convenience and Necessity No. 11482 be amended and CCN No. 11935 be cancelled in accordance with the terms and conditions set forth herein and in the certificates.

IT IS FURTHER ORDERED that the City of Melissa shall serve every customer and applicant for service within the area certified under Certificate of Convenience and Necessity No. 11482 and that such service shall be continuous and adequate.

Texas Commission on Environmental Quality

Issued date:

_____

For the Commission

CONSENT FORM

Applicant's Name: City of Melissa
Application No.: **35253-S**

☐ I concur with the recommendation contained in the staff memorandum transmitted by letter dated July 29, 2008

☐ I do not concur with and intend to respond to the recommendation contained in the staff memorandum transmitted by letter dated July 29, 2008
I understand that I have 14 days from the date of this letter to provide my response.

I am authorized by the City of Melissa to sign this form.

Signature: _____

Printed Name: _____

Relationship to Applicant: _____

Date signed: _____

Mail or fax to:
Brian Dickey
Utilities & Districts Section, MC 153
Water Supply Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087
Fax (512) 239-6972

5. Population served for previous five years:

Year	*Population*
2019	13,724
2020	15,460
2021	18,513
2022	21,499
2023	25,201

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

Year	*Population*
2020	15,460
2030	39,406
2040	85,075
2050	90,406
2060	90,406

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

See end of this utility profile

B. Customer Data

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

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

	Historic 5-year Average	*Baseline*	*5-year goal for year*	*10-year goal for year*
Total GPCD	111.8	111.8	120	120
Residential GPCD	66	66	85	85
Water Loss GPCD	9.2	9.2	11	11
Water Loss Percentage	7.8	7.8	9	9

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	7,195		7,195
Single-Family	7,155		7,155
Multi-Family	40		40
Commercial	267		267
Industrial/Mining	4		4
Institutional	41		41
Agriculture	N/A		N/A
Other/Wholesale	35		35

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

Year	2021	2022	2023
Treated Water Users			
Residential	729	871	305
Single-Family	729	854	287
Multi-Family	0	17	18
Commercial	23	30	10
Industrial/Mining	0	0	0
Institutional	5	2	0
Agriculture	N/A	N/A	N/A
Other/Wholesale	0	19	0

Notes:

"Other/Wholesale" above = Hydrant/Bulk Usage

Commercial includes all HOA irrigation

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

The City of Melissa is unable to provide this information due to confidentiality statements on file with our utility applications.

II. WATER USE DATA FOR SERVICE AREA

A. *Water Accounting Data*

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

   Indicate whether this is ☐ diverted or ☑ treated water.

Year	2019	2020	2021	2022	2023
Month					
January	43,304	34,974	44,556	50,163	57,917
February	40,748	29,902	43,704	43,681	43,161
March	39,650	32,002	43,796	54,266	62,011
April	40,786	37,608	57,145	67,350	65,117
May	46,246	46,854	43,911	73,255	85,795
June	44,474	59,984	56,294	89,815	91,685
July	74,162	75,201	79,145	149,449	104,888
August	80,303	80,106	92,043	125,824	148,270
September	76,526	54,091	89,455	107,676	130,932
October	65,188	69,338	75,922	93,735	96,753
November	42,050	49,557	53,117	63,188	75,808
December	35,792	46,279	57,706	64,961	88,194
Totals	629,229	615,916	736,794	983,363	1,050,531

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

   The figures above were determined by wholesale water purchase numbers.

Notes:

"Other/Wholesale" below = Hydrant/Bulk Usage

Commercial includes all HOA irrigation

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

Year	2019	2020	2021	2022	2023
Account Types					
Residential	327,684.8	370,191.5	454,181.1	582,544.7	648,870.3
Single-Family	325,743.8	365,418.2	448,643.9	577,200.4	633,256.5
Multi-Family	1,941	4,773.3	5,537.2	5,344.3	15,613.8
Commercial	74,092.2	87,985.5	72,669	114,415.4	161,003.2
Industrial/Mining	17,250.3	17,214.4	14,822.1	7,257.7	5,941
Institutional	4,191.6	3,972.3	5,198.1	6,374.7	5,985.4
Agriculture	N/A	N/A	N/A	N/A	N/A
Other/Wholesale	16,742.6	33,453.6	24,407.9	29,446.9	26,715.1

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 %*
2019	51,400,000	8%
2020	17,800,000	3%
2021	82,600,000	11%
2022	112,000,000	11%
2023	61,300,000	6%

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.

Water Type	*Source*	*Amount Authorized*
Surface Water (NTMWD)	North Texas Municipal Water District	711.947 acre feet

Groundwater	Country Ridge Wells	Unlimited
Surface Water (GUTA)	Greater Texoma Utility Authority	181.985 acre feet

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

1. Design daily capacity of system (MGD): 8.0
2. Storage capacity (MGD):
   a. Elevated 2.75
   b. Ground 0.75
3. If surface water, do you recycle filter backwash to the head of the plant?

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

IV. WASTEWATER SYSTEM DATA N/A

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD):
2. Treated effluent is used for ☐ on-site irrigation, ☐ off-site irrigation, for ☐ plant wash-down, and/or for ☐ chlorination/dechlorination.

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

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: 90.45%
2. Monthly volume treated for previous five years (in 1,000 gallons):

Year	2019	2020	2021	2022	2023
Month					
January	39,910	30,083	36,491	33,643	45,124
February	29,010	29,936	26,341	32,083	52,917
March	31,404	48,046	34,040	40,478	53,887
April	31,502	29,724	30,625	44,791	46,183

May	37,382	32,410	48,367	36,236	49,386
June	28,116	30,013	40,796	34,704	62,755
July	25,038	22,578	35,777	33,198	65,484
August	21,742	22,394	33,359	36,673	56,335
September	20,707	30,440	27,178	33,594	55,964
October	24,758	23,068	33,741	37,769	48,759
November	27,375	22,378	37,527	42,602	80,751
December	24,815	28,296	32,535	57,526	67,764
Totals	341,759	349,366	416,777	463,297	685,309

Water Conservation Plan

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

A. Record Management System

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

B. Specific, Quantified 5 & 10-Year Targets

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

C. Measuring and Accounting for Diversions

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

D. Universal Metering

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

E. Measures to Determine and Control Water Loss

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

F. Continuing Public Education & Information

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

G. Non-Promotional Water Rate Structure

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

H. Reservoir Systems Operations Plan

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

I. Enforcement Procedure and Plan Adoption

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

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

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

K. Plan Review and Update

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

VI. ADDITIONAL REQUIREMENTS FOR LARGE SUPPLIERS

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

A. Leak Detection and Repair

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

B. Contract Requirements

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

VII. ADDITIONAL CONSERVATION STRATEGIES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

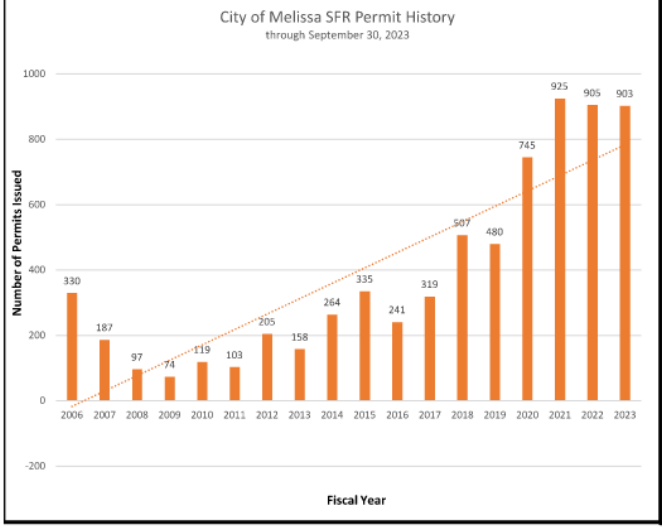
Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

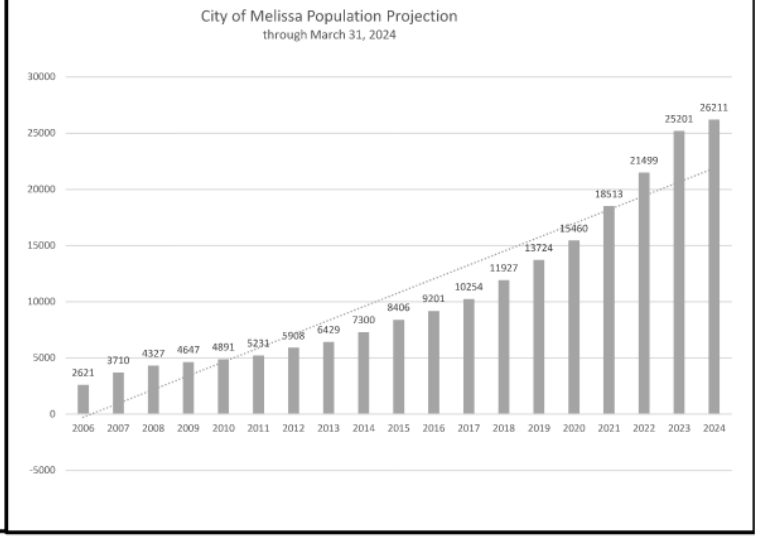
City of Melissa Population Projection
Through March 31, 2024

Current Population Projection Based on SFR Permits Issued and Multifamily Units
26211

SFR Permits Issued per Quarter

Fiscal Year	Q1	Q2	Q3	Q4	Annual Permit Total
2016	71	66	61	43	241
2017	56	63	121	79	319
2018	71	113	160	163	507
2019	82	103	179	116	480
2020	158	179	139	269	745
2021	256	220	290	159	925
2022	108	219	301	277	905
2023	106	232	284	281	903
2024	143	163			306





Future Population Projections:
https://www.cityofmelissa.com/DocumentCenter/View/1782/February-2024-Comprehensive-Plan-Update

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.

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

Contact Information

TWDB Survey Number:	**554200**
Name of System:	**City of Melissa**
PWS ID:	**430040**
Contact Name:	**Jeff Cartwright**
Title:	**Director of Public Works**
Email Address:	**jcartwright@cityofmelissa.com**
Telephone Number:	**469-853-9788**
Year Covered:	**2023**
Days in Year	**365**

Water System Information

Estimated Water Service Area Population:	25,201	***Source:***	*City files: Existing housing stock plus single-family permit numbers pulled in subject year*
# of Backflow Preventers:	6,638		

Peak Day Usage

Delivery Point	**Total System**
Peak Day (MG)	5.44
Average Day (MG)	2.88
Peak/Average Day Ratio	1.89
Firm Pumping Capacity (MGD)	6.18
Storage Volume (MG)	3.50

Authorized Consumption and Water Loss

Total System Input Volume:	1,051		
Billed Metered:	849		
Billed Unmetered (MG):		***Description:***	
Unbilled Metered (MG):	0	***Description:***	*Fire Department Use*
Unbilled Unmetered (MG):	140	***Description:***	*Flushing, Reported Leaks, UARL*
Total Authorized Consumption:	989		
Water Loss (MG):	61		
Water Loss (gpcd):	7		
Water Loss (percent):	6%		

Per Capita Use (Gallons per person per day)

Total Use (MG)	1,051
Residential Use (MG)	649
Municipal Use (MG)	1,045
ICIM Use (MG)	109
Total Per Capita Use (gpcd)	114
Residential Per Capita Use (gpcd)	71
Municipal Per Capita Use (gpcd)	114
ICIM Per Capita Use (gpcd)	12

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

	5-Year Goal	10-Year Goal	
Total GPCD	120	120	*Total GPCD = (Total Gallons in System / Permanent Population) / 365*
Residential GPCD	85	85	*Residential GPCD = (Gallons Used for Residential Use / Residential Population) / 365*
Water Loss (GPCD)	11	11	*Water Loss GPCD = (Total Water Loss / Permanent Population) / 365*
Water Loss (Percentage)	9%	9%	*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	32.07	0.59	0.55	4.82	0.56	-	1.98	-	-
February	33.49	0.55	0.49	2.55	0.77	-	1.61	-	-
March	30.03	0.66	0.49	2.71	0.75	-	2.10	-	-
April	43.53	0.57	0.59	5.08	0.49	-	3.81	-	-
May	50.74	1.24	0.63	5.92	0.56	-	6.55	-	-
June	54.59	0.82	0.85	7.10	0.35	-	7.78	-	-
July	61.53	1.42	0.24	6.65	0.26	-	13.11	-	-
August	84.63	2.08	0.28	13.51	0.38	-	16.31	-	-
September	91.61	1.15	0.65	14.91	0.48	-	20.17	-	-
October	60.60	1.00	0.20	9.79	0.34	-	17.74	-	-
November	52.86	3.26	0.61	4.28	0.66	-	9.81	-	-
December	37.58	2.28	0.41	4.03	0.34	-	5.50	-	-
TOTAL	**633.26**	**15.61**	**5.99**	**81.35**	**5.94**	**-**	**106.48**	**-**	**-**
# of Connections (or Units)	***6,875.00***	***40.00***	***41.00***	***104.00***	***4.00***	**-**	***158.00***		**-**

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

Month	Deliveries from NTMWD	Other Sources							Total Supplies
			Self Supplied	GTUA					
January	26.49		8.19	23.24					57.92
February	16.22		3.73	23.22					43.16
March	30.73		7.87	23.42					62.01
April	23.42		8.00	33.70					65.12
May	28.61		8.26	48.92					85.80
June	32.30		7.75	51.63					91.69
July	29.47		8.14	67.28					104.89
August	31.98		8.07	108.22					148.27
September	25.46		7.66	97.82					130.93
October	22.83		7.78	66.14					96.75
November	27.66		7.05	41.10					75.81
December	29.28		7.56	51.36					88.19
TOTAL	**324.44**	-	**90.05**	**636.04**	-	-	-	-	**1,050.53**

Recorded Supplies by Delivery Point from NTMWD by Month (in Million Gallons):

Month	NTMWD Delivery Point								Total System
	Melissa								
January	26.49								26.49
February	16.22								16.22
March	30.73								30.73
April	23.42								23.42
May	28.61								28.61
June	32.30								32.30
July	29.47								29.47
August	31.98								31.98
September	25.46								25.46
October	22.83								22.83
November	27.66								27.66
December	29.28								29.28
TOTAL	**324.44**	-	-	-	-	-	-	-	**324.44**

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	-	-	-	-	-	-	-	-	-

Additional Information

Describe Any ICIM (Industrial, Commercial, Institutional & Multi-Family) Practices being Implemented to Improve Water Efficiency

Describe any Unusual Circumstances

Provide an Update on Progress in Implementation of Conservation Plan

What Conservation Measures are Planned for Next Year?

Do City Limits Differ Significantly from Water Service Area? If so, explain.

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

Other?

Historical Water Use Data for City of Melissa

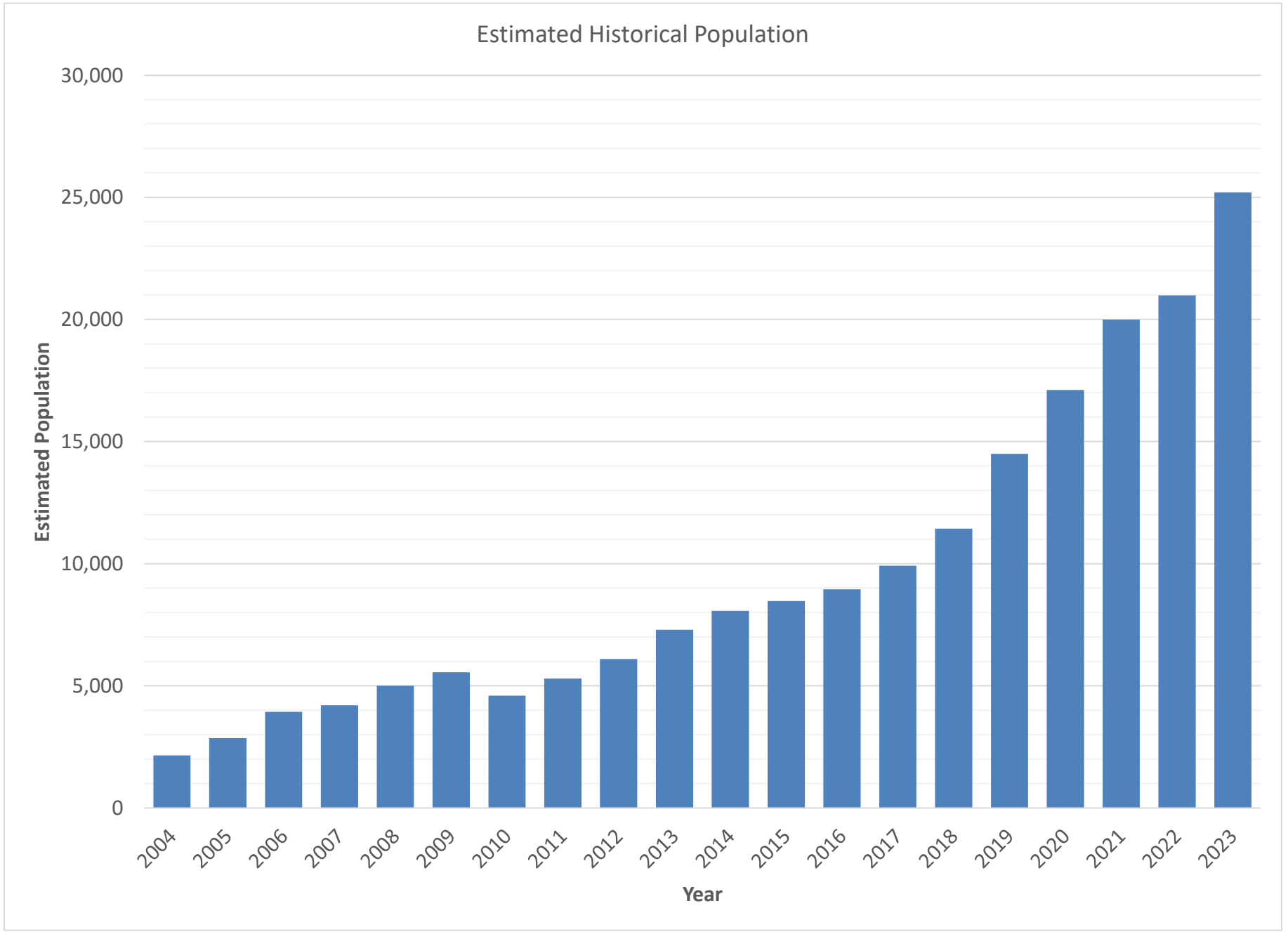
Year	Days in Year	Connections	Estimated Population	Deliveries from NTMWD (MG)	Other Supplies (MG)	Metered Sales by Category (Million Gallons)									
						Residential Single Family	Residential Multi-Family	Public/ Institutional	Commercial	Industrial	Agriculture	Metered Irrigation	Wholesale	Direct Reuse	Total
2004	366	644	2,150	61	11	45.4	0.0	0.0	11.3	0.0	0.0	0.0	0.0	0.0	57
2005	365	816	2,856	119	28	106.0	0.0	0.0	18.6	0.0	0.0	0.0	0.0	0.0	125
2006	365	1,124	3,934	135	27	142.7	0.0	0.0	18.6	0.0	0.0	0.0	0.0	0.0	161
2007	365	1,258	4,200	140	24	114.5	0.0	0.0	35.4	0.0	0.0	0.0	0.0	0.0	150
2008	366	1,355	5,000	196	10	130.9	0.0	0.0	46.0	0.0	0.0	0.0	0.0	0.0	177
2009	365	1,478	5,557	174	39	145.6	0.0	0.0	39.1	0.0	0.0	0.0	0.0	0.0	185
2010	365	1,522	4,600	204	87	134.5	0.0	0.0	69.6	0.0	0.0	0.0	0.0	0.0	204
2011	365	1,602	5,300	179	142	144.5	0.0	0.0	109.9	0.0	0.0	0.0	0.0	0.0	254
2012	366	1,871	6,100	232	85	158.1	0.0	0.0	70.6	0.0	0.0	0.0	0.0	0.0	229
2013	365	2,243	7,290	225	93	202.5	0.0	0.0	42.7	0.0	0.0	0.0	0.0	0.0	245
2014	365	2,482	8,067	196	94	146.3	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	191
2015	365	2,607	8,473	247	130	195.1	0.0	0.0	77.8	0.0	0.0	0.0	0.0	0.0	273
2016	366	2,840	8,953	272	263	221.3	0.0	0.0	207.9	0.0	0.0	0.0	0.0	0.0	429
2017	365	3,175	9,917	310	332	241.9	0.0	0.0	72.2	0.0	0.0	0.0	0.0	0.0	314
2018	365	3,658	11,435	203	535	305.4	0.0	5.1	42.4	5.4	0.0	48.9	0.0	0.0	407
2019	365	4,470	14,501	178	451	327.0	0.0	4.2	35.7	17.3	0.0	63.1	0.0	0.0	447
2020	366	5,468	17,111	219	396	370.2	0.0	4.0	63.1	17.2	0.0	58.4	0.0	0.0	513
2021	365	6,240	19,992	305	428	448.5	5.5	5.2	17.4	14.8	0.0	55.2	0.0	0.0	547
2022	365	7,189	20,984	359	624	577.2	5.3	6.4	26.2	7.3	0.0	88.2	0.0	0.0	711
2023	365	7,222	25,201	324	726	633.3	15.6	6.0	81.4	5.9	0.0	106.5	0.0	0.0	849

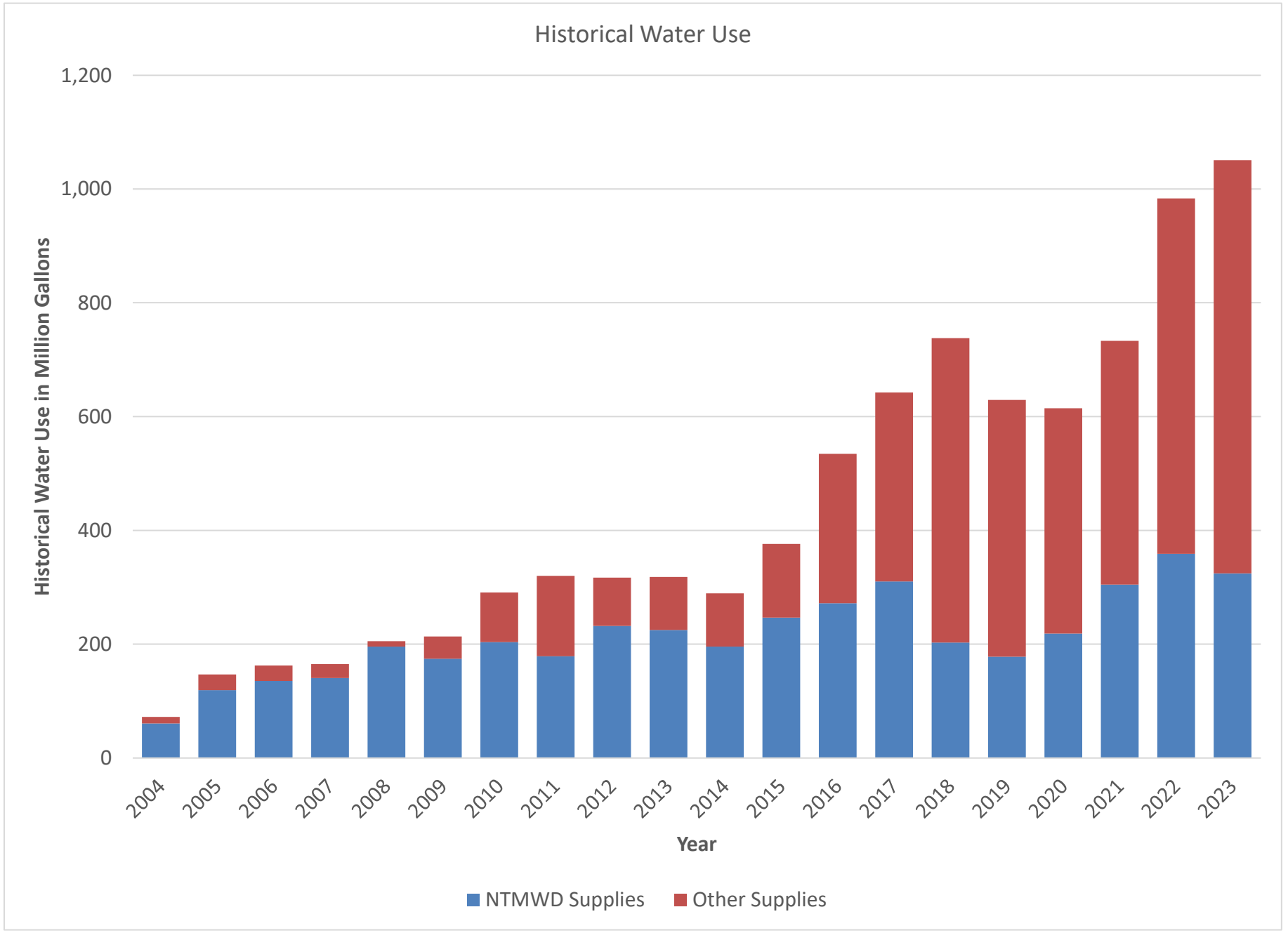
Note: After 2020, Residential sales were divided into single and multi-family classifications. Historical information from the TWDB Water Use Surveys were incorporated where available. The category of 'Other' was removed and replaced with 'Reuse'. Historical volumes for 'Other' were redistributed into the appropriate category when appropriate. These changes were made to be consistent with TWDB terminology.

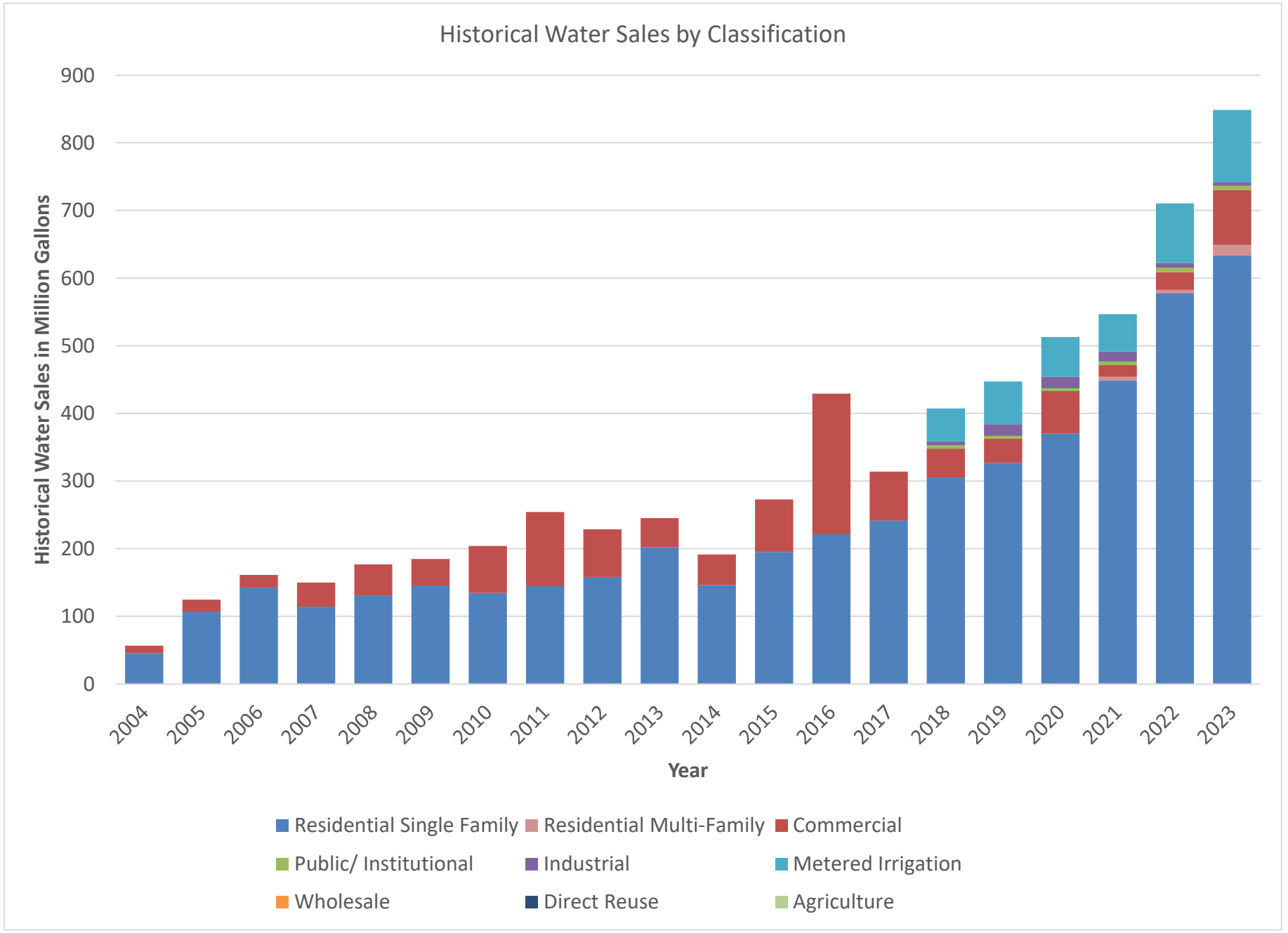
Historical Per Capita Use Data and Water Loss for City of Melissa

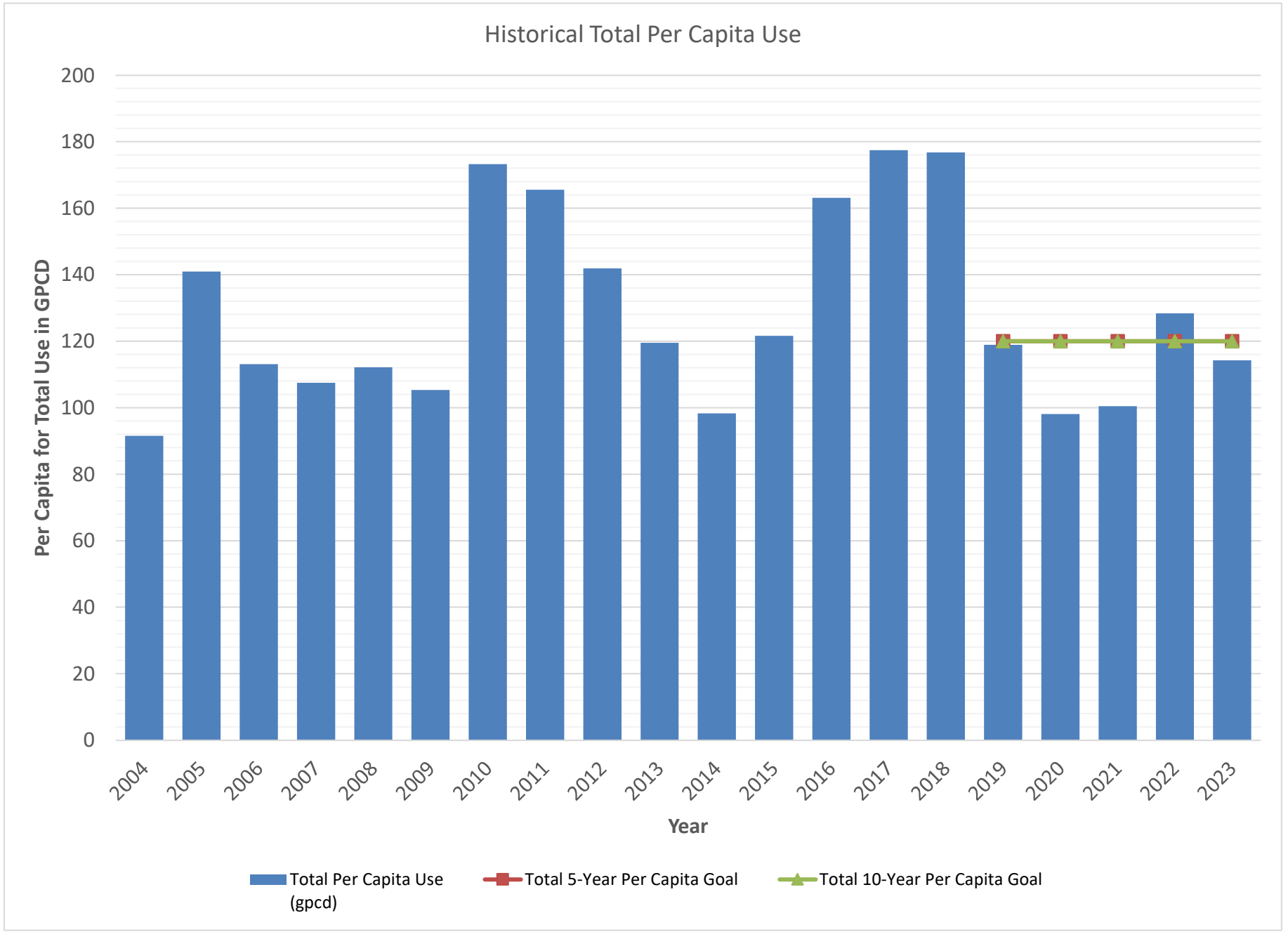
Year	Estimated Population	Total Use			Residential Use			Municipal Per Capita Use (gpcd)	ICIM Per Capita Use (gpcd)	Authorized Consumption				Water Loss						
		Total Per Capita Use (gpcd)	Total 5-Year Per Capita Goal	Total 10-Year Per Capita Goal	Residential Per Capita Use (gpcd)	Residential 5-Year Per 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
2004	2,150	91			58			91	14	56.7	0.0	0.1	2.2	12.9	16			18%		
2005	2,856	141			102			141	18	124.6	0.0	0.1	7.7	14.5	14			10%		
2006	3,934	113			99			113	13	161.3	0.0	0.1	0.0	0.9	1			1%		
2007	4,200	108			75			108	23	149.9	0.0	0.0	0.1	14.8	10			9%		
2008	5,000	112			72			112	25	176.9	0.0	0.2	6.4	21.9	12			11%		
2009	5,557	105			72			105	19	184.7	0.0	0.1	5.2	23.7	12			11%		
2010	4,600	173			80			173	41	204.2	0.0	3.2	17.6	65.9	39			23%		
2011	5,300	166			75			166	57	254.4	0.0	0.1	18.8	47.0	24			15%		
2012	6,100	142			71			142	32	228.7	0.0	0.5	3.5	84.1	38			27%		
2013	7,290	120			76			120	16	245.2	0.0	4.2	14.8	53.8	20			17%		
2014	8,067	98			50			98	15	191.3	0.0	0.7	41.9	55.4	19			19%		
2015	8,473	122			63			122	25	272.9	0.0	1.1	44.3	57.8	19			15%		
2016	8,953	163			68			163	63	429.2	0.0	1.2	17.2	87.0	27			16%		
2017	9,917	177			67			177	20	314.1	116.9	0.0	0.0	211.3	58			33%		
2018	11,435	177			73			175	13	407.2	0.0	0.1	244.7	85.9	21			12%		
2019	14,501	119	120	120	62	85	85	116	11	447.3	0.0	0.2	130.4	51.4	10	11	11	8%	9.25%	9.00%
2020	17,111	98	120	120	59	85	85	95	13	512.8	0.0	43.0	40.8	17.8	3	11	11	3%	9.25%	9.00%
2021	19,992	100	120	120	62	85	85	98	6	546.8	6.7	0.6	96.5	82.6	11	11	11	11%	9.25%	9.00%
2022	20,984	128	120	120	76	85	85	127	6	710.6	0.0	0.1	160.7	112.0	15	11	11	11%	9.25%	9.00%
2023	25,201	114	120	120	71	85	85	114	12	848.6	0.0	0.4	140.2	61.3	7	11	11	6%	9.00%	9.00%

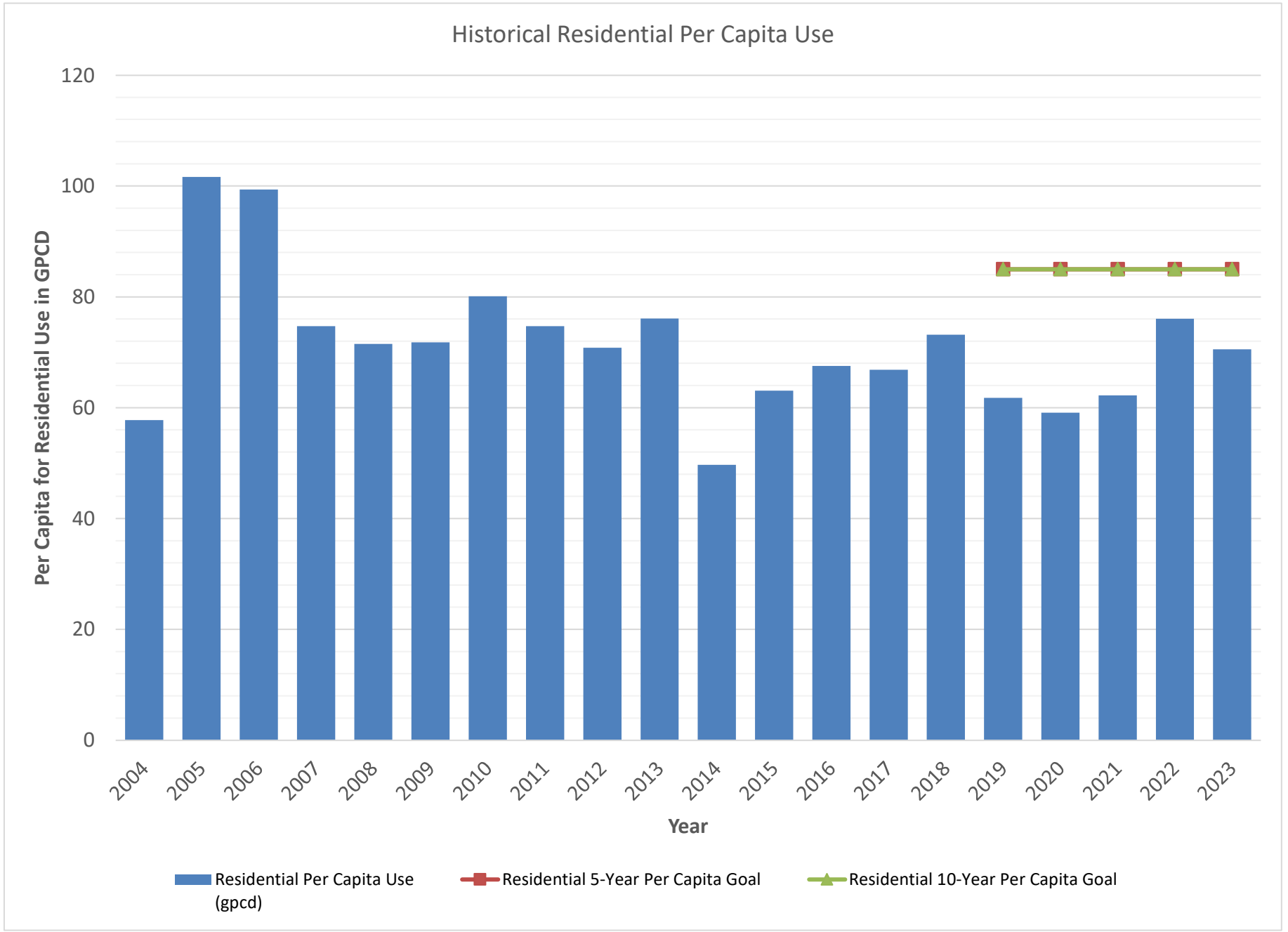
Note:
In-city municipal use = total water supplied less sales to industry, wholesale sales and other sales.
After 2017 - Unaccounted Water has been removed and replaced with Water Losses (per TWDB definition). This category is inclusive of real and apparent losses. Categories for authorized consumption 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.

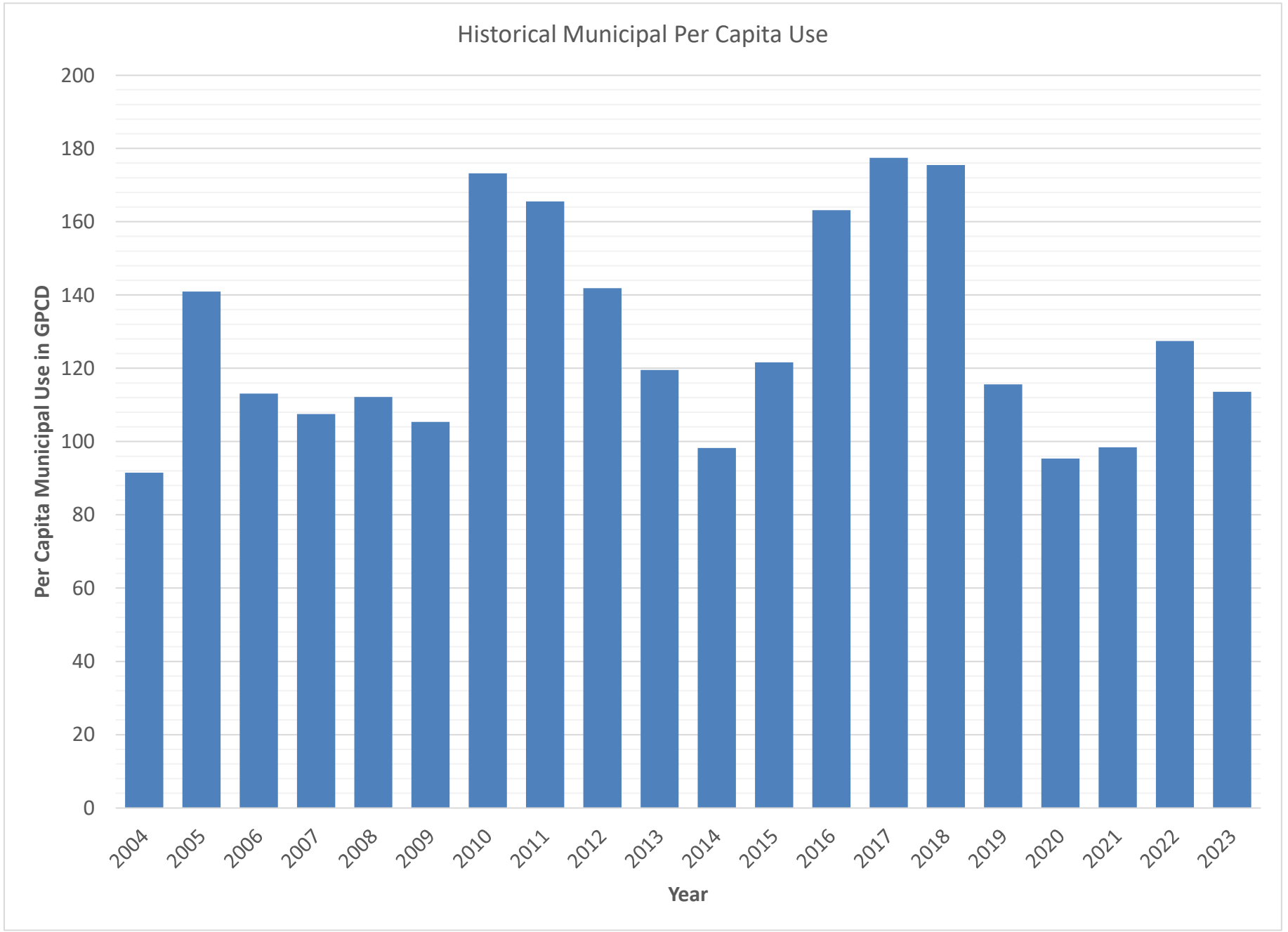

Estimated Historical Population
30,000
25,000
20,000
15,000
10,000
5,000
0
Estimated Population
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year

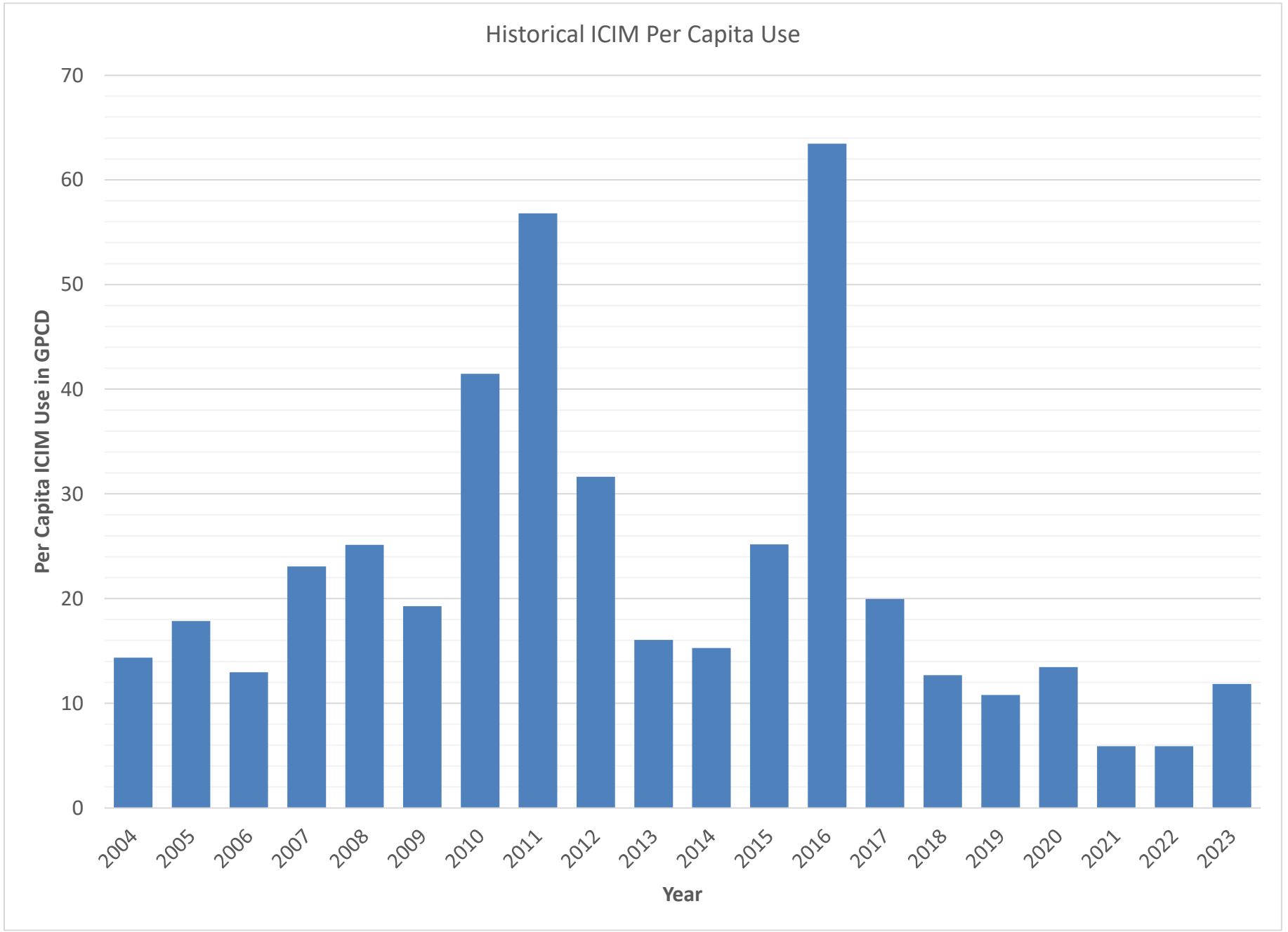

Historical Water Use
1,200
1,000
800
600
400
200
0
Historical Water Use in Million Gallons
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
NTMWD Supplies
Other Supplies

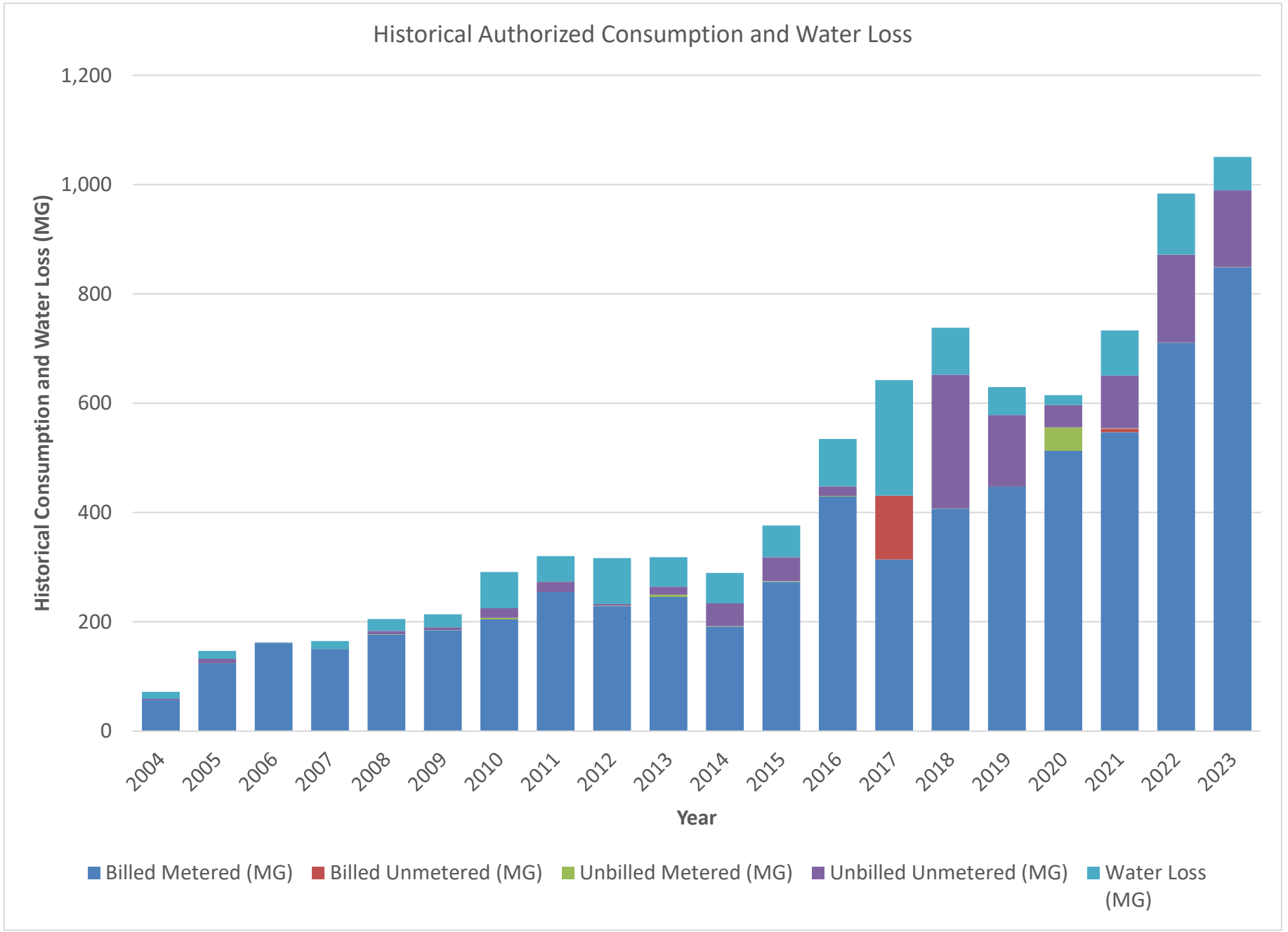

Historical Water Sales by Classification
Historical Water Sales in Million Gallons
900
800
700
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
Residential Single Family
Residential Multi-Family
Commercial
Public/ Institutional
Industrial
Metered Irrigation
Wholesale
Direct Reuse
Agriculture

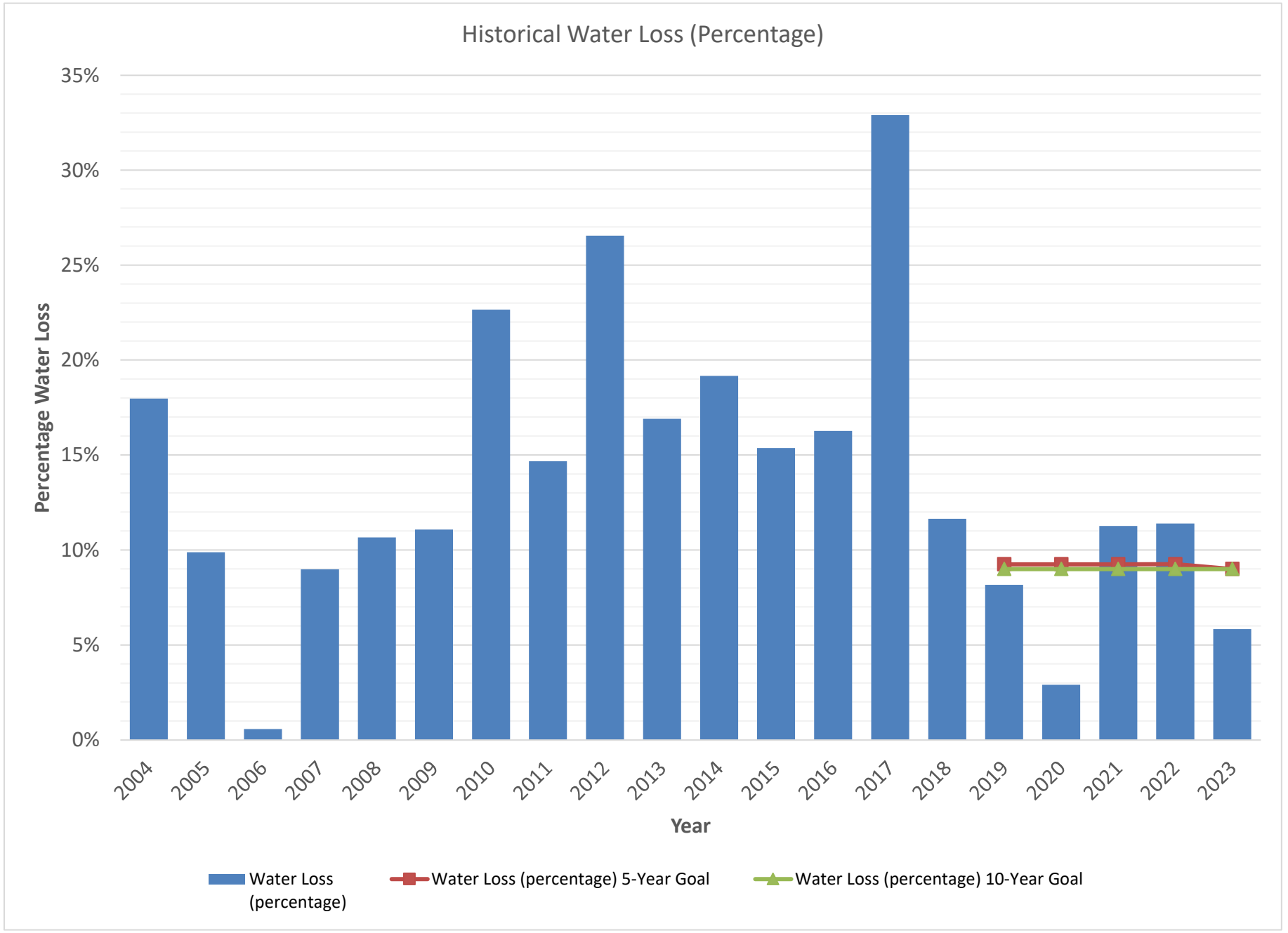

Historical Total Per Capita Use
Per Capita for Total Use in GPCD
200
180
160
140
120
100
80
60
40
20
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
Total Per Capita Use (gpcd)
Total 5-Year Per Capita Goal
Total 10-Year Per Capita Goal


Historical Residential Per Capita Use
120
100
80
60
40
20
0
Per Capita for Residential Use in GPCD
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
Residential Per Capita Use (gpcd)
Residential 5-Year Per Capita Goal
Residential 10-Year Per Capita Goal


Historical Municipal Per Capita Use
Per Capita Municipal Use in GPCD
200
180
160
140
120
100
80
60
40
20
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year


Historical ICIM Per Capita Use
Per Capita ICIM Use in GPCD
70
60
50
40
30
20
10
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year


Historical Authorized Consumption and Water Loss
Historical Consumption and Water Loss (MG)
1,200
1,000
800
600
400
200
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
Billed Metered (MG)
Billed Unmetered (MG)
Unbilled Metered (MG)
Unbilled Unmetered (MG)
Water Loss (MG)


Historical Water Loss (Percentage)
35%
30%
25%
20%
15%
10%
5%
0%
Percentage Water Loss
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Year
Water Loss (percentage)
Water Loss (percentage) 5-Year Goal
Water Loss (percentage) 10-Year Goal

Appendix E

TCEQ Water Conservation Implementation Report

Texas Commission on Environmental Quality

Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4600, FAX (512) 239-2214

WATER CONSERVATION IMPLEMENTATION REPORT FORM AND SUMMARY OF UPDATES/REVISIONS TO WATER CONSERVATION PLAN

(Texas Water Code §11.1271(b) and Title 30 Texas Administrative Code §288.30(1) to (4))

Please note, this form replaces the following forms: TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers)

This Form is applicable to the following entities:

1. **Water Right Holders of 1,000 acre-feet or more for municipal, industrial, and other non-irrigation uses.**
2. **Water Right Holders of 10,000 acre-feet or more for irrigation uses.**

The above noted entities are required by rule to submit updates to their water conservation plan(s) and water conservation implementation report(s) every five years beginning May 1, 2009. See 30 Texas Administrative Code (TAC) §288.30(1) to (4). Entities must also submit any revisions to their water conservation plan within 90 days of adoption when the plans are revised in between the five-year submittal deadlines. This form may be used for the five-year submittal or when revisions are made to the water conservation plans in the interim periods between five-year submittals. Please complete the form as directed below.

1. Water Right Holder Name:_____

2. Water Right Permit or Certificate Nos._____

   _____

3. Please Indicate by placing an 'X' next to all that Apply to your Entity:

Water Right Holder of 1,000 acre-feet or more for non-irrigation uses

_____Municipal Water Use by Public Water Supplier

_____Wholesale Public Water Supplier

_____Industrial Use

_____Mining Use

_____Agriculture Non-Irrigation

Water Right Holder of 10,000 acre-feet or more for irrigation uses

_____Individually-Operated Irrigation System

_____Agricultural Water Suppliers Providing Water to More Than One User

Water Conservation Implementation Reports/Annual Reports

4. Water Conservation Annual Reports for the previous five years were submitted to the Texas Water Development Board (TWDB) for each of the uses indicated above as required by 30 TAC §288.30(10)(C)? Yes_____ No_____

TCEQ no longer requires submittal of the information contained in the detailed implementation report previously required in Forms TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers). However, the Entity must be up-to-date on its Annual Report Submittals to the TWDB.

Water Conservation Plans

5. For the five-year submittal (or for revisions between the five-year submittals), attach your updated or revised Water Conservation Plan for each of the uses indicated in Section 3, above. Every updated or revised water conservation plan submitted must contain each of the minimum requirements found in the TCEQ rules and must be duly adopted by the entity submitting the water conservation plan. Please include evidence that each water conservation plan submitted has been adopted.

   - Rules on minimum requirements for Water Conservation Plans can be found in 30 TAC Chapter 288. http://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288
   - Forms which include the minimum requirements and other useful information are also available to assist you. Visit the TCEQ webpage for Water Conservation Plans and Reports. https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserve.html

*Call **512-239-4600** or email to **wcp@tceq.texas.gov** for assistance with the requirements for your water conservation plan(s) and report(s).*

6. For each Water Conservation Plan submitted, list dates and descriptions of the conservation measures implemented, and the actual amount of water saved.

7. For each Water Conservation Plan submitted, state whether the five and ten-year targets for water savings and water loss were met in your *previous* water conservation plan.
   Yes _____ No _____
   If the targets were not met, please provide an explanation as to why any of the targets were not met, including any progress on that particular target.

8. For each five-year submittal, does each water conservation plan submitted contain *updated* five and ten-year targets for water savings and water loss?
Yes_____ No_____

If yes, please identify where in the water conservation plan the updated targets are located (page, section).

9. In the box below (or in an attachment titled "Summary of Updates or Revisions to Water Conservation Plans), please identify any other revisions/updates made to each water conservation plan that is being updated or revised. Please specify the water conservation plan being updated and the location within the plan of the newly adopted updates or revisions.

10. *Form Completed by (Point of Contact):* _____
(If different than name listed above, owner and contact may be different individual(s)/entities)

Contact Person Title/Position: _____

Contact Address:_____

Contact Phone Number:_____Contact Email Address: _____

Signature: _____ Date: _____

Appendix F

Letters to Regional Water Planning Group and NTMWD

4/24/2024

Region C Water Planning Group
c/o Trinity River Authority
P.O. Box 60
Arlington, TX 76004

Dear Chair:

Enclosed please find a copy of the Water Conservation and Water Resource and Emergency Management Plan for The City of Melissa. 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 4/9/2024.

Sincerely,

Bridget Saxton

City of Melissa

Appendix G

Adoption of Plans

CITY OF MELISSA, TEXAS **ORDINANCE NO._____**

AN ORDINANCE OF THE CITY OF MELISSA, TEXAS, REPEALING ORDINANCE NO. 19-16 (WATER CONSERVATION PLAN) AND ORDINANCE NO. 19-17 (WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN) AND ADOPTING A NEW WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN TO PROMOTE THE RESPONSIBLE USE OF WATER; REQUIRING THE FILING OF THIS ORDINANCE AND PLAN WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY; PROVIDING FOR PENALTIES FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING REPEALING, SAVINGS AND SEVERABILITY CLAUSES, AN EFFECTIVE DATE AND FOR THE PUBLICATION OF THE CAPTION HEREOF.

WHEREAS, the City Council of the City of Melissa, Texas ("City Council") previously adopted Ordinance No. 19-16, which established a Water Conservation Plan for the City of Melissa, Texas ("Melissa"); and

WHEREAS, the City Council also adopted Ordinance No. 19-17, which established a Water Resource and Emergency Management Plan for Melissa; and

WHEREAS, Melissa recognizes that the amount of water available to its water customers is limited and further recognizes the importance of a long-term water supply for its water customers; and

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

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

WHEREAS, the City Council finds that it is an urgent need and in the best interest of the public to repeal the existing Water Conservation Plan and Water Resource and Emergency Management Plan and adopt the new Water Conservation Plan and Water Resource and Emergency Management Plan as set forth below; and

WHEREAS, pursuant to Chapter 54 of the Texas Local Government Code and other law, Melissa is authorized to adopt such Ordinances as are necessary to preserve and conserve its water resources; and

WHEREAS, the City Council finds that it would be advantageous and beneficial to the citizens of Melissa to repeal Ordinance No. 19-16 and Ordinance No. 19-17 in their entirety, to

replace the existing Water Resource and Emergency Management Plan and Water Conservation Plan and to adopt the North Texas Municipal Water District ("NTMWD") Model Water Resource and Emergency Management Plan and Water Conservation Plan, as modified for Melissa, as Melissa's official policy for the conservation of water; and

WHEREAS, the City Council finds that the adoption of the new Water Resource and Emergency Management Plan and Water Conservation Plan will be advantageous and beneficial to the citizens of Melissa and will protect the public health, safety and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MELISSA, TEXAS THAT:

SECTION 1. Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2. Repeal of Ordinance No. 19-16. Ordinance No. 19-16 is hereby repealed in its entirety and replaced by this Ordinance. The effective date of the repeal discussed in this Section shall not occur until the Effective Date of this Ordinance (hereinafter defined), at which time Ordinance No. 19-16 shall be repealed. Such repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 19-16 occurring before the effective date of this Ordinance.

SECTION 3. Repeal of Ordinance No. 19-17. Ordinance No. 19-17 is hereby repealed in its entirety and replaced by this Ordinance. The effective date of the repeal discussed in this Section shall not occur until the Effective Date of this Ordinance (hereinafter defined), at which time Ordinance No. 19-17 shall be repealed. Such repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 19-17 occurring before the effective date of this Ordinance.

SECTION 4. Plans Adopted. The City Council hereby approves and adopts the Water Resource and Emergency Management Plan and Water Conservation Plan (collectively, "Plans"), attached hereto as Exhibit A and incorporated herein by reference for all purposes. Melissa commits to implement the requirements and procedures set forth in the adopted Plans.

SECTION 5. Penalty. Any customer, as defined by 30 TEX. ADMIN. CODE Chapter 291, failing to comply with the provisions of the Plans shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined a sum not exceeding TWO THOUSAND AND 00/100 DOLLARS ($2,000.00) per day per occurrence and/or discontinuance of water service by Melissa. 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. Melissa's authority to seek injunctive or other civil relief available under the law is not limited by this section. Melissa retains all legal rights and remedies available to it pursuant to local, state and federal law.

SECTION 6. Filing of Ordinance and Plans with the TCEQ. The City Manager or his designee is hereby directed to file one (1) copy of each of the Plans and this Ordinance with the TCEQ in accordance with 30 TEX. ADMIN. CODE Chapter 288.

SECTION 7. Savings/Repealing. All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portions of said ordinances shall remain in full force and effect.

SECTION 8. Severability. Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional and/or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. Melissa hereby declares that it would have passed this Ordinance, and each section, subsection, sentence, clause and/or phrase thereof, regardless of whether any one or more sections, subsections, sentences, clauses and/or phrases is declared unconstitutional and/or invalid.

SECTION 9. Effective Date. The Water Resource and Emergency Management Plan established by Ordinance No. 19-16 shall continue to apply until such time as the water emergency response stage currently in effect under the Water Resource and Emergency Management Plan terminates and a less restrictive stage is applicable. At such time ("Effective Date"), this Ordinance shall become effective, the new Water Resource and Emergency Management Plan shall take effect and the appropriate water resource management stage as provided in the Water Resource and Emergency Management Plan shall be initiated. However, in no event shall this Ordinance be effective before its publication as required by the City Charter and by law. The Water Conservation Plan shall become effective from and after the adoption and publication of this Ordinance as required by law.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF MELISSA, TEXAS on this ___ day of _____, 2024.

_____
Jay Northcut, Mayor

ATTESTED TO AND CORRECTLY RECORDED:

_____
Hope Cory, City Secretary

Dates of Publication: _____, *Anna-Melissa Tribune*