Water Conservation And Drought Response Plan

April 2019
(Amended July 2021)

Water Conservation Plan

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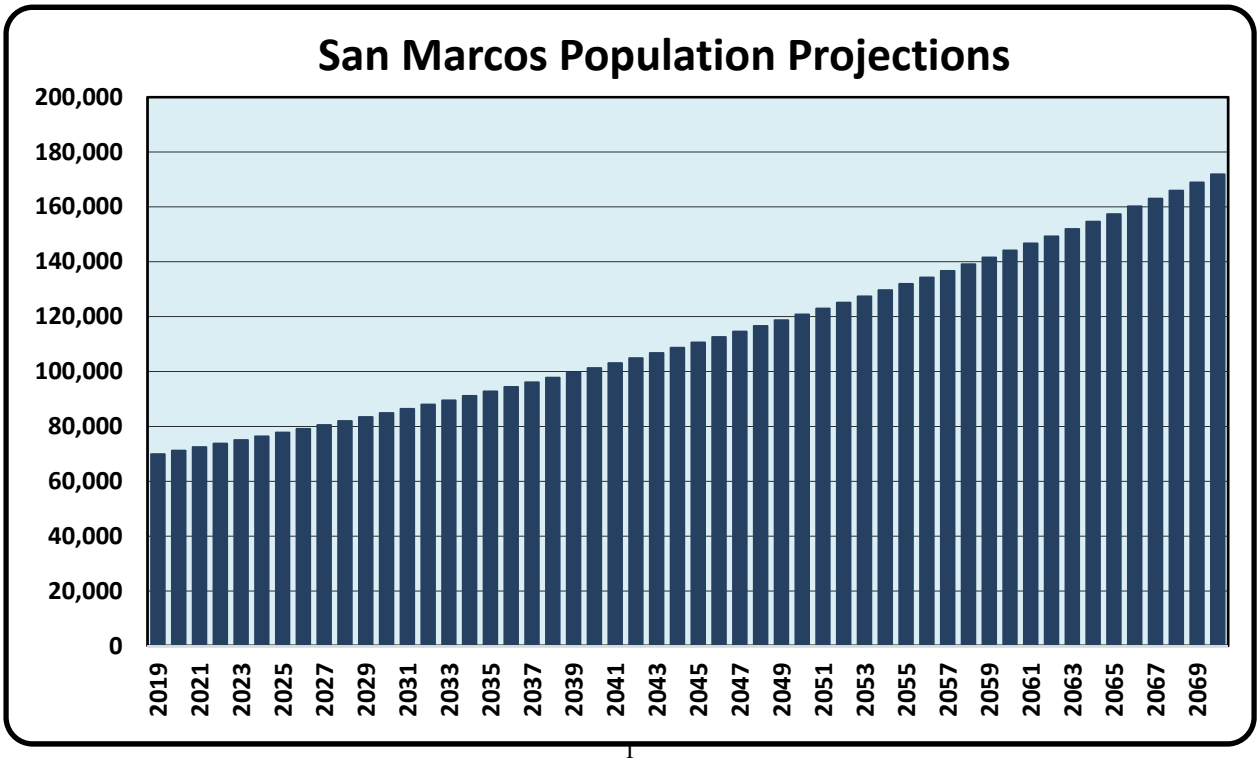
Water Conservation Plan
for the City of San Marcos, Texas

1.0 Introduction

The objectives of the City of San Marcos Water Conservation Plan (the Plan) are to improve efficiency of water use and to decrease per capita consumption in order to provide additional water supplies for future growth. Projections for the San Marcos area indicate that by 2038 current water supplies may be insufficient to meet the needs of a rapidly growing population. To address future water needs the City is investigating several water supply strategies including purchase of additional water rights, conservation of existing water resources, and reuse of existing resources. The City of San Marcos Water Supply Master Plan and South Central Texas (Region L) Water Planning Group have identified conservation of existing resources as an essential water management strategy for San Marcos and the south central Texas region.

The City of San Marcos currently utilizes both surface and ground water resources to meet its water needs. The majority of the water, about eighty percent, is obtained from Canyon Lake under contract with the Guadalupe Blanco River Authority (GBRA). The City is presently able to withdraw up to 10,000 acre-feet annually from Canyon Lake under the terms of the contract. The remainder of the City water supply is pumped from the Edwards Aquifer, which prior to 1999 was the sole water source for San Marcos. The City has a permit to use up to 5,433



acre-feet of Edwards Aquifer groundwater per year. These groundwater withdrawals may be reduced by up to 44% when aquifer levels fall below certain triggers, resulting in a firm groundwater supply of 3,043 acre-feet per year.

The agencies that govern these resources require preparation and implementation of effective water conservation plans. In addition to providing for the needs of a rapidly growing population, this Plan fulfills the requirements of the agencies that govern use of state waters. Section 13.146 of the Texas Water Code requires retail public utilities that provides potable water service to 3,300 connection or more to submit a water conservation plan to the Texas Water Development Board (TWDB). Texas Administrative Code (TAC) 31, Chapter 363 requires that entities applying for or receiving financial assistance of more than $500,000 develop, submit and implement a water conservation plan. TAC 30, Chapter 288, enforced by the Texas Commission on Environmental Quality (TCEQ), requires surface water right holders to develop, submit and implement water conservation plans. The Edwards Aquifer Authority (EAA) requires groundwater permit holders to implement water conservation plans and to document their conservation efforts.

This Plan is applicable to all persons, customers, and properties located within the City of San Marcos Water/Wastewater Utility service area and to all persons, customers and properties using water provided by the City of San Marcos Water/Wastewater Utility. The Plan is also applicable to wholesale water customers. Every wholesale water supply contract that the City enters into requires that the wholesale customer adopt and implement a Water Conservation Plan that conforms to the TWDBs requirements, and submit it to the TWDB.

2.0 System Profile

The City of San Marcos Water/Wastewater Utility is comprised of several components including groundwater pumping stations, a surface water production and treatment system, a water distribution system, a wastewater collection system, and a wastewater treatment facility. Over 75 City employees and contractors work to maintain these systems.

The groundwater system is comprised of six active Edwards Aquifer wells, which produce an average of 1.75 MGD, providing about twenty percent of the City's annual water usage.

The Regional Surface Water Treatment Plant began operation in January 2000 and has helped to drastically reduce the City's reliance on the Edwards Aquifer. The 20 mile long raw water pipeline and water treatment facility are operated and maintained by the GBRA. In 2008 the plant was expanded to operate at 21 MGD in order to accommodate additional users north of San Marcos. The facility currently produces about 6.40 MGD for San Marcos, supplying about eighty percent of the City's water needs.

The City maintains about 283 miles of water pipelines, ranging in size from 1.5 inch diameter water lines to 30 inch diameter mains. Nine storage tanks provide a combined storage capacity of approximately 5.9 million gallons.

The City maintains approximately 231 miles of wastewater collection mains, with 43 lift stations. The mains deliver wastewater to a 9 MGD wastewater treatment plant. Because much of the treated wastewater is discharged into the San Marcos River, the City is required to use advanced tertiary treatment in order to meet the 5-5-6-2-1 treatment quality standard.

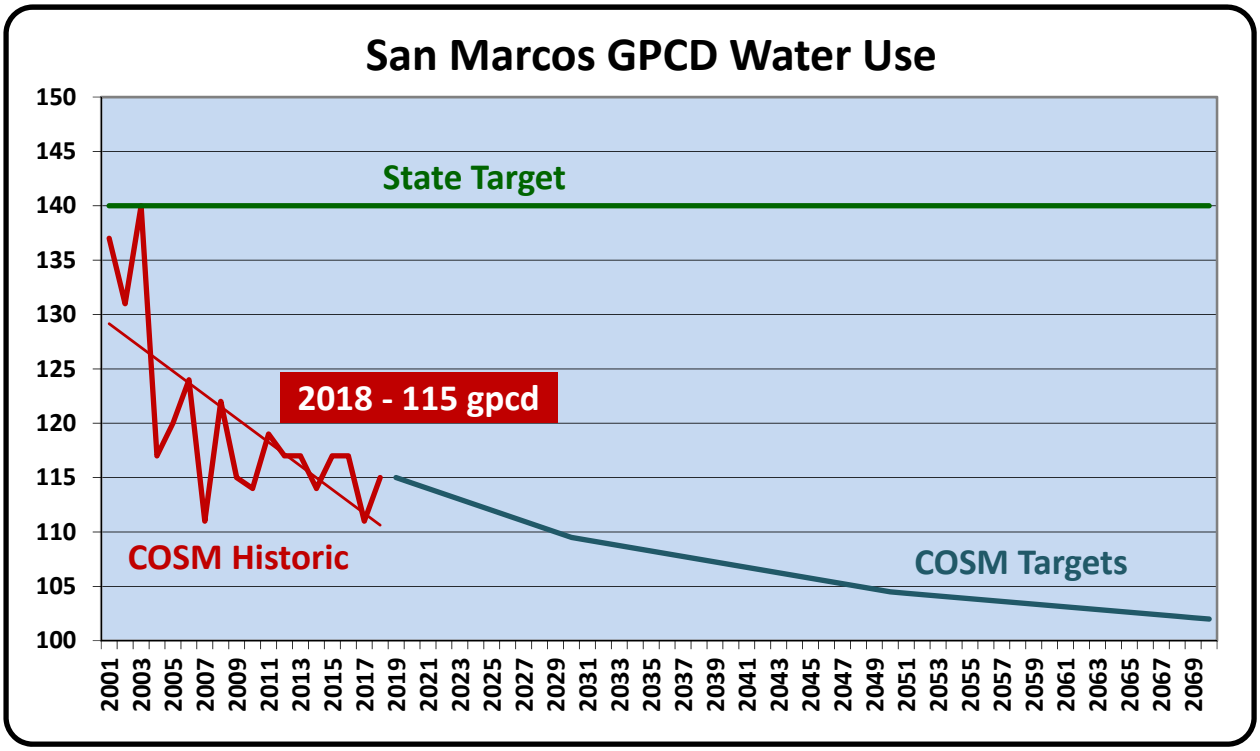
3.0 Customer Profile

The City of San Marcos Water/Wastewater Utility currently provides water service to a population of 71,153 residents. The population is projected to double by 2058 and to exceed 170,000 by 2070 (Figure 1).

Water service is provided to approximately 12,942 system connections. About 86% of the connections are classified as Residential users, which includes single-family homes, duplexes, triplexes and fourplexes, apartment communities, and mobile home parks. The residential user class consumes about 56% of the annual water supply.

The Commercial classification makes up about 11% of total connections and is comprised of service establishments such as restaurants, hotels, retail stores, and offices. Commercial users consume approximately 24% of the annual supply. Governmental and Institutional users, about 3% of the customer base, include local, state, and federally owned facilities and community organizations such as schools, churches, and medical facilities. This user class consumes about 9% of the annual water supply. San Marcos has only 35 Industrial accounts which use only a small fraction of the annual supply.

In 2018 City of San Marcos water customers used an average of 115 gallons per capita per day (gpcd), with a residential gpcd of 56. Since 2009, per capita usage has ranged from 119 to 111 gallons per day, with anaverage use of 116 gpcd, and an average downward trend of 0.7 gpcd per year.



4.0 Conservation Goals

The City of San Marcos has implemented numerous programs to reduce water consumption and improve efficiency. The City plans to continue development of current programs and to implement additional programs as needed, with a goal of reducing per capita usage as follows:

Year	Municipal GPCD	Residential GPCD	Water Loss GPCD
2024 (5-year target)	113	55	14
2029 (10-year target)	110	54	13
2044 (25-year target)	106	52	13
2069 (50-year target)	102	50	12

In order to reach these goals the City will employ a variety of water conservation best management practices (BMPs) including:

- Maintain unaccounted water usage at or below 12%;
- Continue meter replacement and testing programs;
- Continue system-wide leak detection programs;
- Expand public information and education programs;
- Acquire additional water conservation staff as needed;
- Continue residential and ICI water survey programs;
- Implement Large-scale ICI water conservation incentives;
- Expansion of reclaim water distribution system;
- Implement efficient irrigation rebate program;
- Install xeriscape, rainwater harvesting and condensate collection demonstration sites;
- Expand efficient landscape incentive program;
- Continued use of Advanced Metering Infrastructure (AMI) system for water conservation.

5.0 Best Management Practices

The City has already implemented numerous BMPs as a means of reaching water conservation goals. BMPs are defined as established practices and techniques that have shown documented improvements in water use efficiency.

5.1 Water Audit and Leak Detection/Repair Program

The City conducts monthly and annual pre-screening water audits in an effort to determine and control unaccounted water usage. Unaccounted usage is determined through metered water production, metered sales, and other verifiable water uses such as fire-fighting and line flushing. The City also estimates water losses from known leaks.

In 2000, the City implemented a system-wide leak detection program, with one quarter of the system surveyed each year. Leaks are detected through sonic sounding of all service lines, fire hydrants and valves using leak detection equipment. Reports are generated throughout the survey period and leaks are repaired as soon as practicable, with precedence given to larger leaks.

In addition to the annual leak survey, the City conducts ongoing leak detection activities such as periodic visual inspection of lines and a 24-hour leak report hotline. Suspected and reported leaks are investigated immediately and repaired as soon as possible.

The City's aggressive leak detection and water audit program has lowered unaccounted water use to below 15%, the goal established by the American Water Works Association (AWWA). The City will continue to refine these programs with a goal of reducing and maintaining unaccounted usage below 12%.

5.2 Universal Metering

The City meters all water connections within the service area, and estimates unmetered uses such as fire-fighting, line flushing and water leaks. Construction water from hydrants is allowed only through portable metering devices controlled by the City. Compound water meters are used for customers that are likely to experience periodic low flows, such as apartment complexes and restaurants. Turbo meters are used for customers that are likely to experience only high flows such as car washes, laundromats and irrigation.

In 1987, the City implemented a meter replacement program in which all water meters within the service area are replaced on a ten-year cycle. In 1996 the City added a large meter testing program in which meters four inches and larger are tested annually and repaired or replaced as needed. Testing is accomplished through flow comparison with a calibrated digital water meter, with each meter tested at high, medium, and low flows. In addition to scheduled replacement and testing, meters that are suspected of malfunction are investigated immediately and repaired or replaced as needed.

In 2013 the City completed installation of an Advanced Metering Infrastructure (AMI) system for both water and electric meters. The AMI system provides hourly water usage data which City staff uses in water conservation audits and to identify customer-side leaks. The City utilizes AMI data to provide weekly Continuous Flow Reports to customers that appear to have customer-side water leaks. The City will continue to develop methods for utilizing AMI data and to expand use of this data in conservation programs.

5.3 Water Conservation Ordinances

In 1994, the City adopted its first year-round water conservation ordinance along with the drought management rules.

In 2006 the City adopted a water conservation plumbing code which sets forth requirements for commercial car washes, cooling systems, decorative water features, commercial dining facilities, on-premise laundry facilities and landscape irrigation systems. Irrigation system codes were updated in 2009 to reflect changes to state regulations.

The water conservation and drought response ordinance includes year-round rules that prohibit water waste, use of sprinklers during daytime hours, charity car washes, non-recirculating decorative water features and at-home car washing using open hoses. This ordinance is reviewed and updated periodically, with the latest amendment occurring in 2015.

The recently revised San Marcos Land Development Code also includes landscape water conservation measures for new development. These rules require developers and homebuilders to offer xeriscape options for new single-family homes, require use of low-water landscape materials, provide limitations of turf grass areas, and require minimum soil depths and quality.

5.4 Conservation Pricing

In 1994, the City implemented an increasing block rate structure for all water customers. The rates have been amended numerous times to arrive at the current rate schedule. Each active account is charged a minimum bill based on water meter size, and additional charges based on water use. Costs are higher for rural water customers than for customers within the corporate City limits, and the City offers a Lifeline rate for customers that qualify for financial assistance.

Single-family residential wastewater charges are based on average winter use, while all other users are based on actual metered water consumption. Accounts with dedicated landscape meters are not charged for wastewater service.

The City plans to continue the increasing block rate structure, with rate adjustments implemented as needed. Future adjustments may include seasonal water rates, drought surcharges, or higher rates for irrigation accounts.

5.5 Public Information and Education

The City maintains an active public information program to educate water users about the importance of water conservation, and to inform them of effective water conservation techniques. The goal is to reach all water customers and K-12 students through various methods including:

- written materials such as press releases, newsletter articles, and bill inserts;

- water conservation website;
- social media such as Facebook and Twitter;
- representation at public events such as the Business Expo;
- presentations for local groups, clubs, and organizations; and
- classroom presentations and sponsorship of water conservation curriculum.

The City will continue to develop and expand the public information program as additional resources become available. Future public information programs may include expanded use of social media and participation in state or region-wide conservation campaigns.

5.6 Conservation Staff

In April 2001, the City created a water conservation position to develop, coordinate, and implement the City's water conservation and drought management programs. The position has evolved into a joint conservation coordinator for both the water and electric utilities. A full-time conservation technician position was added in 2009. Conservation staff are responsible for:

- development and management of the water conservation budget;
- execution and analysis of residential and ICI water audits;
- development and distribution of public information materials;
- coordination of water conservation school education program;
- development and implementation of rebate/incentive programs;
- preparation of mandated water conservation and drought management plans; and
- enforcement of conservation and drought ordinances.

Additional full or part-time conservation staff will be employed as the water conservation program develops.

5.7 Water Audit Program

In May 2001, the City implemented a water audit program for single and multi-family residential water customers. Each audit includes an evaluation of household leaks, measurement of shower and faucet flow rates, measurement of toilet flush volumes, and assessment of other water uses within the home. Each customer receives general water conservation information as well as individualized information detailing specific water conservation strategies.

In 2002, the City implemented a water audit program for ICI customers. Each audit includes an analysis of known water uses including domestic water usage, process water usage, and equipment water usage which are used to determine water conservation opportunities.

The City will continue to offer water surveys for both residential and ICI water customers.

5.8 Plumbing Retrofit Program

The Plumbing Retrofit Program has been suspended due to mandated water-efficient plumbing codes and regional saturation.

The program was conducted in conjunction with the water audit program and other rebate/incentive programs. Customers that received a water audit or participated in City rebate/incentive programs were also eligible to receive free replacement showerheads, kitchen and bathroom faucet aerators, and toilet leak detection tablets. The City also distributed plumbing devices at public events and through direct door-to-door delivery.

5.9 High-Efficiency Appliance Rebate Program

The High-Efficiency Appliance Rebate Program has been suspended due to wide availability and competitive pricing of low-water use appliances.

The Wash-Smart Rebate Program was introduced in 2002 for single-family residential water customers, and encouraged use of efficient machines through monetary rebates determined by the level of efficiency of the machine. Criteria were obtained from the Consortium for Energy Efficiency (CEE).

In 2011 the City expanded the washer rebate program to include multi-family and ICI water customers, with higher rebates offered for commercial and coin-operated clothes washers.

5.10 Toilet Replacement Program

The Toilet Replacement Program has been suspended due to mandated efficiency standards, availability of efficient products, and market saturation.

The residential low-flow toilet replacement program was originally implemented in 1995 through funding received from the Edwards Underground Water District (EUWD). The City continued the toilet incentive program until 2017, with various adjustments to the program throughout the years including making the rebate available to multi-family residential and ICI

customers, offering rebates for low-flow urinals, offering rebates for installation of high-efficiency fixtures in new construction, and free high-efficiency toilet distribution events.

5.11 ICI Conservation Programs

The City has historically implemented various programs for ICI water customers such as the annual Water Efficiency Achievement (WEA) awards introduced in 2003, and the Pre-Rinse Spray Valve Exchange program launched in 2004.

These programs have been suspended but the City will continue to research and develop additional cost-effective water conservation programs for ICI customers, including a large-scale commercial rebate program which can be customized for various conservation initiatives.

5.12 Reuse of Treated Effluent

In 2001, the City began delivery of reclaimed wastewater to the American National Power (ANP) facility located near San Marcos. ANP uses the reclaimed water along with Guadalupe River water to cool their power-producing turbines. The reclaimed water is used instead of treated potable water to dilute the high total suspended solids (TSS) of the river water. Once used, the water goes to an onsite reverse osmosis treatment facility where it is treated and recirculated back into the cooling system.

In 2013 the City began delivering reclaim water to the TXI Hunter Cement Plant for use in plant process water and dust control. In 2016 the City added Brookfield Residential as a reclaim water customer for irrigation of the Kissing Tree Golf Course and streetscape areas.

As per the Direct Water Reuse Expansion Feasibility Study completed in 2014 through a partnership with Texas State University and the Texas Water Development Board, the City has installed reclaim water mains to provide reclaim water to the University thermal plants. The University is expected to make connection and begin utilizing the reclaim water in 2021. These reclaim water mains will also be used to irrigate City parks and athletic fields along the route.

5.13 Rainwater Harvesting Rebate Program

In 2009 the City implemented a rebate program for purchase of rain barrels. The City has also provided distribution of free rain barrels in conjunction with Native Plant Sales, and has sponsored rain barrel sales through contractor partnerships. The rebate program has been expanded to include rebates for large rainwater and condensate collections systems.

5.14 Efficient Landscape and Irrigation Rebate Program

In 2013 the City implemented an irrigation system evaluation program. Through this program the City provides free irrigation system check-ups for residential and commercial water customers to insure their irrigation systems are operating efficiently. The evaluation includes checking for leaks, making sure heads are adjusted properly, checking pressure, and making sure the controller is set properly.

In 2017 the City launched the Soil Saver Rebate Program to encourage development of healthy, drought-tolerant soils. The program includes rebates for core aeration, compost application and use of mulch, and is open to all City of San Marcos water customers.

In 2020 the City implemented a Grass Removal Rebate to encourage single-family water customers to replace water-intensive lawn areas with low or no-water use alternatives such as xeriscape beds, decorative stone, pervious patis and artivcial turf grass.

6.0 Implementation, Tracking and Enforcement

The Water Conservation Plan is implemented by the Water/Wastewater Utilities Director and conservation staff. Funding for water conservation programs is provided through water rates.

The water conservation program is tracked both as a whole and individually for each program. GPCD is the primary method of tracking success of the conservation program overall. Individual programs are tracked through measured or estimated water savings when possible, or through participation rates or other means. Water conservation program information is reported annually to the TWDB.

City of San Marcos water conservation ordinances are enforced by the Water/Wastewater Utilities Director and conservation staff, code compliance officers, the San Marcos Police Department and Municipal Court, and other City employees as appropriate. First offenses generally receive a verbal or written notice of violation, along with public education materials. Repeat offenses may result in assessment of civil penalties, misdemeanor fines, and suspension of water service.

7.0 Conclusion

Water conservation is an effective and cost-effective method of reducing municipal water demand, and is a necessary component of a successful water supply plan. Through conservation the City of San Marcos plans to reduce water use to 102 gpcd by 2070. The City has already implemented numerous best management practices, and plans to implement additional best management practices as needed to meet its conservation goals.

Drought Response Plan

April 2019

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Drought Response Plan
for the
City of San Marcos, TX

1.0 Introduction

Droughts and other uncontrollable circumstances can disrupt availability of water supplies from both ground and surface water sources. Higher consumer demands during drought periods place additional strain on already stressed water supplies. Limitations on the supply of either ground or surface water, or on facilities to pump, treat, store, or distribute water constitute an emergency demand management situation.

The objectives of the City of San Marcos Drought Response Plan (the Plan) are to protect water supplies in order to protect human health, safety and welfare, and to minimize adverse impacts caused by drought and other uncontrollable water supply emergencies. The objectives will be achieved through implementation of both voluntary and mandatory demand management measures. The goal of demand management is to reduce non-essential water uses such as landscape irrigation, ornamental fountains and ponds, washing of motor vehicles and washing of impervious surfaces, in order to provide an uninterrupted supply of water for essential uses such as drinking, bathing, sanitation, and fire protection.

The San Marcos Emergency Water Demand Management Plan was originally established in 1991 and was revised by the San Marcos City Council in 1994 and 1996. The Plan has been amended several times to provide consistency with guidelines established by applicable state entities including the Texas Commission on Environmental Quality (TCEQ), Texas Water Development Board (TWDB), Edwards Aquifer Authority (EAA), and Region L Planning Group.

The Plan currently provides for year-round restrictions and four demand management stages, and includes the following elements:

- Trigger conditions signaling the start of each drought response stage;
- Reduction goals for each drought response stage;
- Mandatory demand reduction measures for each stage; and
- Penalties for violations.

The provisions of the Plan apply to all persons, customers, and property located within the San Marcos city limits and to all persons, customers, and property utilizing water provided by the City of San Marcos. These requirements do not apply to alternative sources of water such as rainwater, gray water and reclaimed water.

2.0 Public Participation and Notification

The public is invited to participate in updates and actions relative to the Drought Response Plan through various public information outlets including the City of San Marcos internet site, press releases, bill inserts, and other methods as deemed appropriate. The City of San Marcos periodically provides the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated, and the drought response measures to be implemented in each stage.

As specified under Section 86.058 of the ordinance, notices to implement or terminate each respective stage of the demand management plan "shall be posted on the city internet web site, broadcast on the city cable channel, released to public media outlets, and published in whole or in summary form in at least one newspaper of general circulation within the city." The Director of the City of San Marcos Water/Wastewater Utilities (Director) may also directly notify other individuals, agencies and entities as deemed necessary.

3.0 Initiation and Termination

The Director will monitor water supply conditions on a daily basis in order to determine when the "trigger" conditions described below justify initiation or termination of each demand management stage. The triggering criteria are based on levels established by the Edwards Aquifer Authority to protect spring flows and endangered species during critical period conditions. Although the trigger criteria are expressed in terms of Edwards Aquifer index well levels, the water demand reduction measures are applicable to both ground and surface water components of the supply.

Any stage of the Drought Response Plan may be implemented when a water quality, water supply, distribution system or other emergency exists as determined by the Director.

Each stage shall be terminated when the criteria are no longer satisfied, or as otherwise determined by the Director.

TRIGGER (10-day average)	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
J-17 Index Well Level (MSL)	<660	<650	<640	<630	<625
San Marcos Spring Flow (CFS)	<96	<80	<65	<50	<50
Comal Spring Flow (CFS)	<225	<200	<150	<100	<45

4.0 Goals

The goals of the Drought Response Plan are to achieve reductions in water usage by limiting non-essential water uses. The specific reduction goals for each demand management stage are as follows:

- Stage 1: Reduce total water usage by 10%.
- Stage 2: Reduce total water usage by 20%.
- Stage 3: Reduce total water usage by 30%.
- Stage 4: Reduce total water usage by 40%.
- Stage 5: Reduce total water usage by 44%.
- Emergency: Reduce total water usage as needed to protect human health, safety and welfare.

5.0 Demand Management Measures

The City of San Marcos Drought Response Plan includes year-round restrictions and five drought response stages with progressively stringent demand management measures for the following:

- Water waste;
- Irrigation with hose-end sprinklers and automatic sprinkler irrigation systems;
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems;
- Irrigation of golf courses, athletic fields and commercial nurseries;
- Vehicle washing:

- Swimming pools;
- Aesthetic water features;
- Washing of impervious surfaces;
- Foundation watering; and
- Other non-essential water uses.

Specific measures for each stage can be found in the Water Conservation Ordinance in Appendix A.

6.0 Variances

The Director may grant a variance to the provisions of this Plan if it is determined that special circumstances exist. A variance will be considered if it meets any of the following conditions:

- Compliance will adversely affect public health and/or safety,
- Compliance cannot be technically accomplished, or
- Alternative methods can be implemented which will achieve the same reduction in water use.

Persons requesting an exemption from the provisions of this Plan must file a petition for variance with the Director. Petitions for variance must include the following information:

- Name and address of petitioner(s),
- Purpose and location of water use,
- Specific provision(s) of the Plan from which the petitioner is requesting a variance,
- Detailed explanation of how the specific provision of the Plan will adversely affect the petitioner,
- Period of time for which the variance is sought,
- Alternative demand management measures the petitioner is taking or proposes to take to meet the intent of this Plan, and
- Any other pertinent information as requested.

Petitions for variance will be reviewed and acted upon within two weeks of receipt. If the petition for variance is denied, the petitioner may request an appeal from the San Marcos City Manager.

New landscape variances may be issued to allow additional watering days for the establishment of newly installed landscaping. New landscape variances will not be issued in June, July or August of any year, or at any time when stage 3 or higher is in effect.

Variances may also be issued for residential customers that wish to request an alternative to their designated weekday. The request must be submitted in writing to the director, and shall have a term of one year.

7.0 Implementation and Enforcement

The City of San Marcos Drought Response Plan is implemented and enforced in accordance with sections 86.066 – 86.071 of the drought response ordinance. Enforcement personnel include the director and designated public services staff, City peace officers, City code enforcement officers, and other individuals authorized to enforce City ordinances. Enforcement actions may include education, formal notices of violation, civil penalties assessed though the utility billing system, misdemeanor charges, installation of flow control devices and termination of water service.

APPENDIX A:

WATER CONSERVATION AND DROUGHT RESPONSE ORDINANCES

SAN MARCOS CITY CODE CHAPTER 86, ARTICLE 2
DIVISION 2. WATER CONSERVATION

Section 86.056. Definitions.

Terms in this division have the following meanings unless otherwise specified:

Aesthetic water feature means a fountain, waterfall, landscape lake or pond, or another decorative feature where the use is entirely ornamental and serves no other functional purpose.

Alternative water means any water from a source on or available to a customer's premises from a source other than directly from the city's water sources. Alternative water sources include the following:

(1) Water from a natural source such as a spring, pond, or river (if permitted).

(2) Reclaimed water.

(3) Gray water.

(4) Rain water.

(5) Any water supplied by the city water system that has passed through a point of delivery and is no longer controlled by the public water system.

The term does not include water from a well.

Aquifer means the Edwards Aquifer.

Automatic sprinkler irrigation system means a system of fixed pipes and sprinkler heads that apply water to landscape plants or turf.

Cfs means cubic feet per second.

Charity car wash means any special event involving the washing of vehicles for a donation.

Commercial car wash means any permanently located or mobile car wash that washes automobiles, trucks, trailers, boats and other mobile equipment for a fee.

Commercial vehicle washing means washing of automobiles, trucks, trailers, boats, and other mobile equipment at any commercial car wash or fleet maintenance facility, or at any location other than a private residence.

Designated usage time means the established time periods for which particular types of water use are allowed unless otherwise specified within the ordinance. The designated usage times are as follows:

(1) For standard time, water use is allowed from midnight to 10 a.m. and 5 p.m. to midnight.

(2) For daylight savings time, water use is allowed from midnight to 10 a.m. and 8 p.m. to midnight.

Designated weekday means the weekday within each calendar week for which particular types of water use are allowed, which shall be the day specified in a variance request filed under section 86.064-1 or which shall be the day based on the last number of the street address for a property, as follows:

(1) Monday - street addresses ending with 0 or 1

(2) Tuesday - street addresses ending with 2 or 3

(3) Wednesday - street addresses ending with 4 or 5

(4) Thursday - street addresses ending with 6 or 7

(5) Friday - street addresses ending with 8 or 9

Director means the director of the Public Services Department, or a person designated by the director to act in his or her behalf, including the water conservation coordinator.

Distribution uniformity means a measure of how uniformly water is applied to an irrigated area, expressed as a percentage.

Drip irrigation system means a system of fixed pipes or hoses with emitters designed to apply water to plants slowly and under pressurized conditions at or below the soil surface.

EAA means Edwards Aquifer Authority.

Existing facility means a swimming pool, hot tub, aesthetic water feature or any similar facility, installed during any period for which a drought response stage is not in effect.

Existing landscape means landscaping plants and/or turf on which installation was completed more than 21 days from current date.

Gray water means water that has previously been used in sinks, showers, bath tubs and clothes washing machines.

Hand-held bucket means a container holding five gallons or less.

Hand-held hose means a hose equipped with a positive shutoff device.

Health and safety use means use of water for any purpose that is necessary to protect human health and safety.

Impervious surface means a type of surface that prevents water from penetrating directly into the ground. Impervious surfaces include, but are not limited to, sidewalks, driveways, paved streets, and pavers or stones set with mortar.

Index well means the Edwards Aquifer water level index well in San Antonio, Texas denoted as well AY-68-37-203 (J-17).

Irrigation conservation plan means a plan that outlines specific measures to be taken during drought stages to progressively reduce consumption in higher drought stages. The plan must include an irrigation system maintenance plan and an irrigation system analysis, and must meet reduction goals as established by the director.

Irrigation system analysis means a zone-by-zone analysis of an irrigation system that includes the following elements:

(1) A detailed site inspection including examination of soil types, root zone depths, operating pressures, and sprinkler heads/valves;

(2) A determination of precipitation rates and distribution uniformity (DU); and

(3) Basic seasonal irrigation schedules.

Landscape watering means the application of water to grow landscaping plants.

Landscaping plant means any plant, including any tree, shrub, vine, herb, flower, vegetable, fruit, succulent, ground cover or grass species that is used for landscaping purposes or for the support of intensive recreational areas including playgrounds and playing fields.

Makeup means partial refilling of a swimming pool or hot tub or aesthetic water feature to replace water lost through evaporation or backwashing.

Mobile car wash means a commercial car wash equipped with a vehicle or trailer-mounted self-contained washing system with any of the following: water or detergent

solution, storage tank, high pressure/low flow pumping equipment, hoses, spray wand and related appurtenances.

New facility means a swimming pool, hot tub, aesthetic water feature or any similar facility, installed during any period for which a drought response stage is in effect. When the stage, together with all other stages which precede or succeed that stage in a continuous time period, is rescinded, the new facility will be treated thereafter as an existing facility.

New landscape means landscaping plants and/or turf on which installation was completed within the last 21 days.

Non-commercial vehicle washing means washing of automobiles, trucks, trailers, boats, and other mobile equipment at a private residence.

Non-essential water use means any usage of water that is not required for:

(1) a health and safety use;

(2) personal needs such as drinking, bathing, cooling, heating, cooking, food preparation, cleaning or sanitation;

(3) medical or industrial processes; or

(4) watering of livestock.

Not in use means as it relates to swimming pools, hot tubs and similar facilities, a facility which is not used during any 24 hour period.

Person means, with respect to this division, any individual, corporation, partnership, or other legal entity within the corporate limits of the City, or any individual, corporation, partnership, or other legal entity outside the corporate limits of the city who is a city water customer.

Positive shutoff device means a device which permits water to flow through it only when a continuous pressure is applied to a handle, trigger, or similar portion of the device.

Precipitation rate means the speed at which a sprinkler or irrigation system applies water. Precipitation rates are measured in inches per hour or inches per minute.

Reclaimed water means treated wastewater that is recycled or reused after it has been used for another purpose.

Soaker hose means a portable hose with small openings that applies water slowly to plants at the soil surface.

Swimming pool means any structure, basin, chamber or tank, including hot tubs, containing an artificial body of water for swimming, diving or recreational bathing, and having a depth of two (2) feet or more at any point.

Vegetable garden means a plot of land dedicated to cultivation of edible plants intended for human consumption.

Waste means any activity which causes or results in excessive water usage, including but not limited to the following:

(1) allowing water to run off a property onto adjacent properties, or into a gutter, ditch, drain, creek, or any other natural or man-made water course;

(2) operating a sprinkler system with broken heads or pipes, or with misaligned spray heads that direct water over a street or parking lot; or

(3) failure to repair any controllable leak.

Section 86.057. Applicability.

The requirements set forth under this division apply to all persons and entities located within the city limits, and to all persons and entities using water provided by the city water utility. These requirements do not apply to alternative sources of water such as rainwater, gray water and reclaimed water.

Section 86.058. Implementation and termination of drought response stages.

The director shall monitor water supply conditions on a daily basis and provide information to the city manager. The director shall issue notices to implement or terminate drought response stages as follows:

(1) *Stage 1.*

a. Stage 1 shall be implemented when any one of the following conditions occur, or as otherwise determined by the director:

1. The ten-day average aquifer level is less than 660 feet above mean sea level as measured at the J-17 index well; or

2. The ten-day average discharge rate of San Marcos Springs is below 96 cfs as measured at the San Marcos gauging station; or

3. The ten-day average discharge rate of Comal Springs is below 225 cfs as measured at the Comal gauging station.

b. Stage 1 shall be terminated when the conditions in subsection (1) are no longer satisfied, or as otherwise determined by the director.

(2) *Stage 2.*

a. Stage 2 shall be implemented when any one of the following conditions occur, or as otherwise determined by the director:

1. The ten-day average aquifer level is less than 650 feet above mean sea level as measured at the J-17 index well; or

2. The ten-day average discharge rate of San Marcos Springs is below 80 cfs as measured at the San Marcos gauging station; or

3. The ten-day average discharge rate of Comal Springs is below 200 cfs as measured at the Comal gauging station.

b. Stage 2 shall be terminated when the conditions in subsection (1) are no longer satisfied, or as otherwise determined by the director.

(3) *Stage 3.*

a. Stage 3 shall be implemented when any one of the following conditions occur, or as otherwise determined by the director:

1. The ten-day average aquifer level is less than 640 feet above mean sea level as measured at the J-17 index well; or

2. The ten-day average discharge rate of San Marcos Springs is below 65 cfs as measured at the San Marcos gauging station; or

3. The ten-day average discharge rate of Comal Springs is below 150 cfs as measured at the Comal gauging station.

b. Stage 3 shall be terminated when the conditions in subsection (1) are no longer satisfied, or as otherwise determined by the director.

(4) *Stage 4.*

a. Stage 4 shall be implemented when any one of the following conditions occur, or as otherwise determined by the director:

1. The ten-day average aquifer level is less than 630 feet above mean sea level as measured at the J-17 index well; or

2. The ten-day average discharge rate of San Marcos Springs is below 55 cfs as measured at the San Marcos gauging station; or

3. The ten-day average discharge rate of Comal Springs is below 100 cfs as measured at the Comal gauging station.

b. Stage 4 shall be terminated when the conditions in subsection (1) are no longer satisfied, or as otherwise determined by the director.

(5) *Stage 5.*

a. Stage 5 shall be implemented when any one of the following conditions occur, or as otherwise determined by the director:

1. The ten-day average aquifer level is less than 625 feet above mean sea level as measured at the J-17 index well; or

2. The ten-day average discharge rate of San Marcos Springs is below 50 cfs as measured at the San Marcos gauging station; or

3. The ten-day average discharge rate of Comal Springs is below 45 cfs, or the three-day average discharge is below 40 cfs as measured at the Comal gauging station.

b. Stage 5 shall be terminated when the conditions in subsection (1) are no longer satisfied, or as otherwise determined by the director.

(6) *Water quality, water supply, distribution system or other emergency*. Any stage may be implemented when a water quality, water supply, distribution system or other emergency exists as determined by the director. The stage will be terminated when the conditions which prompted initiation of the restrictions no longer exist.

(7) *Notice of implementation and termination of stages.* Notices of implementation and termination of stages shall be posted on the city internet web site, broadcast on the city cable channel, released to public media

outlets, and published in whole or in summary form in at least one newspaper of general circulation within the city.

Section 86.059. Year-round water use allowances and restrictions.

The following allowances and restrictions are in effect at all times; however, the allowances and restrictions may be superseded by more stringent restrictions upon implementation of a drought response stage.

(1) Waste of water is prohibited at all times.

(2) Irrigation with hose-end sprinklers and automatic sprinkler irrigation systems is allowed during designated usage times.

(3) Irrigation with soaker hose and drip irrigation systems is allowed on any day and at any time.

(4) Irrigation with hand-held bucket or hand-held hose is allowed on any day and at any time.

(5) Irrigation of golf courses and athletic fields with sprinklers is allowed during designated usage times.

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time.

(7) Irrigation of vegetable gardens is allowed on any day and at any time.

(8) Vehicle washing.

a. Charity car washes are prohibited unless held at a commercial car wash.

b. Non-commercial vehicle washing is allowed on any day and at any time, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools located outdoors should be covered while not in use to minimize evaporative losses.

(10) Operation of non-recirculating aesthetic water features is prohibited at all times.

(11) Washing of impervious surfaces is allowed but should be limited unless required for health and safety use.

(12) Foundation watering is allowed on any day and at any time.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.060. Stage 1 water use allowances and restrictions.

The following measures are in effect for any period when stage 1 of the drought response plan has been implemented:

(1) Waste of water is prohibited.

(2) Irrigation with hose-end sprinklers is allowed only one day per week on the designated weekday during designated usage times. Irrigation with automatic sprinkler irrigation systems is allowed only one day per week between the hours of 8:00 p.m. on the designated weekday and 8:00 a.m. on the following day.

(3) Irrigation with soaker hose and drip irrigation system is allowed on any day and at any time.

(4) Irrigation with hand-held bucket or hand-held hose is allowed on any day and at any time.

(5) Irrigation of golf courses and athletic fields is restricted as follows:

a. Irrigation of out-of-play areas such as entryways and clubhouses shall follow general Stage 1 irrigation restrictions.

b. Irrigation of in-play areas shall follow general Stage 1 irrigation restrictions unless an irrigation conservation plan has been submitted and approved by the director. If the general irrigation restrictions are being followed, alternative days may be requested to accommodate field usage schedules.

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time.

(7) Irrigation of vegetable gardens using hand-held bucket, hand-held hose, soaker hose or drip irrigation is allowed on any day and at any time.

(8) Vehicle washing is restricted as follows:

a. Charity car washes are prohibited unless held at a commercial car wash.

b. Non-commercial vehicle washing is allowed one day per week and must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools located outdoors should be covered when not in use to minimize evaporative losses.

(10) Operation of non-recirculating aesthetic water features is prohibited.

(11) Washing of impervious surfaces is allowed only one day per week.

(12) Foundation watering using drip system, soaker hose or hand-held hose is allowed only one day per week.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.061. Stage 2 water use allowances and restrictions.

The following measures are in effect for any period when stage 2 of the drought response plan has been implemented:

(1) Waste of water is prohibited.

(2) Irrigation with hose-end sprinklers is allowed only one day per week on the designated weekday during designated usage times. Irrigation with automatic sprinkler irrigation systems is allowed only one day per week between the hours of 8:00 p.m. on the designated weekday and 8:00 a.m. on the following day.

(3) Irrigation with soaker hose and drip irrigation system is allowed on any day during designated usage times.

(4) Irrigation with hand-held bucket or hand-held hose is allowed on any day and at any time.

(5) Irrigation of golf courses and athletic fields is restricted as follows:

a. Irrigation of out-of-play areas such as entryways and clubhouses shall follow general Stage 2 irrigation restrictions.

b. Irrigation of in-play areas shall follow general Stage 2 irrigation restrictions unless an irrigation conservation plan has been submitted and approved by the director. If the general irrigation restrictions are being followed, alternative days may be requested to accommodate field usage schedules.

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time.

(7) Irrigation of vegetable gardens using hand-held bucket, hand-held hose, soaker hose or drip irrigation is allowed on any day and at any time.

(8) Vehicle washing is restricted as follows:

a. Charity car washes are prohibited except at a commercial car wash.

b. Non-commercial vehicle washing is allowed one day per week and must be done using a hand-held bucket or hand-held hose equipped with a positive shutoff device.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools located outdoors should be covered when not in use to minimize evaporative losses.

(10) Filling of new aesthetic water features is prohibited.

(11) Washing of impervious surfaces is allowed only one day per week.

(12) Foundation watering using a drip system, soaker hose or hand-held hose is allowed only one day per week.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.062. Stage 3 water use allowances and restrictions.

The following measures are in effect for any period when stage 3 of the drought response plan is in effect:

(1) Waste of water is prohibited.

(2) Irrigation with hose-end sprinklers is allowed only one day every other week beginning on the second Monday after stage 3 has been declared, on the designated weekday during designated usage times. Irrigation with automatic sprinkler irrigation systems is allowed only one day every other week, beginning on the second Monday after stage 3 has been declared, between the hours of 8:00 p.m. on the designated weekday and 4:00 a.m. on the following day.

(3) Irrigation with soaker hose and drip irrigation system is allowed on any day during the designated usage times.

(4) Irrigation with hand-held bucket or hand-held hose is allowed on any day and at any time.

(5) Irrigation of golf courses and athletic fields is restricted as follows:

a. Irrigation of out-of-play areas such as entryways and areas around clubhouses shall follow general Stage 3 irrigation restrictions.

b. Irrigation of in-play areas shall follow general Stage 3 irrigation restrictions unless an irrigation conservation plan has been submitted and approved by the director. If the general irrigation restrictions are being followed, alternative days may be requested to accommodate field usage schedules

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time

(7) Irrigation of vegetable gardens using hand-held bucket, hand-held hose, soaker hose or drip irrigation is allowed on any day and at any time.

(8) Vehicle washing is restricted as follows:

a. Charity car washes are prohibited unless held at a commercial car wash.

b. Non-commercial vehicle washing is allowed one day per week and must be done using a hand-held bucket or hand-held hose equipped with a positive shutoff device.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools located outdoors should be covered when not in use to minimize evaporative losses.

(10) Operation of outdoor aesthetic water features is prohibited.

(11) Washing of impervious surfaces is prohibited unless required for health and safety purposes.

(12) Foundation watering using a drip system, soaker hose or hand-held hose is allowed only one day per week.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.063. Stage 4 water use allowances and restrictions.

The following measures are in effect for any period when stage 4 of the drought response plan is in effect:

(1) Waste of water is prohibited.

(2) Irrigation with hose-end sprinklers is allowed only one day every other week beginning on the second Monday after stage 3 has been declared, on the designated weekday during designated usage times. Irrigation with automatic sprinkler irrigation systems is allowed only one day every other week, beginning on the second Monday after stage 3 has been declared, between the hours of 8:00 p.m. on the designated weekday and 4:00 a.m. on the following day.

(3) Irrigation with soaker hose and drip irrigation system is allowed only one day per week on the designated weekday during designated usage times.

(4) Irrigation with hand-held bucket or hand-held hose is allowed on any day during designated usage times.

(5) Irrigation of golf courses and athletic fields is restricted as follows:

a. Irrigation of out-of-play areas such as entryways and areas around clubhouses shall follow general Stage 3 irrigation restrictions.

b. Irrigation of in-play areas shall follow general Stage 3 irrigation restrictions unless an irrigation conservation plan has been submitted and approved by the director. If the general irrigation restrictions are being followed, alternative days may be requested to accommodate field usage schedules

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time.

(7) Irrigation of vegetable gardens using hand-held bucket, hand-held hose, soaker hose or drip irrigation is allowed on any day during designated usage times.

(8) Vehicle washing is restricted as follows:

a. Charity car washes are prohibited unless held at a commercial car wash.

b. Non-commercial vehicle washing is allowed one day per week and must be done using a hand-held bucket or hand-held hose equipped with a positive shutoff device.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools:

a. Swimming pools located outdoors should be covered when not in use to minimize evaporative losses.

b. Filling existing swimming pools is prohibited unless required for health and safety purposes.

c. Filling new swimming pools is allowed.

d. Make up of existing pools is allowed.

(10) Operation of outdoor aesthetic water features is prohibited.

(11) Washing of impervious surfaces is prohibited unless required for health and safety purposes.

(12) Foundation watering using a drip system, soaker hose or hand-held hose is allowed only one day per week.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.064. Stage 5 water use allowances and restrictions.

The following measures are in effect for any period when stage 5 of the drought response plan is in effect:

(1) Waste of water is prohibited.

(2) Irrigation with hose-end sprinklers and automatic sprinkler irrigation systems is prohibited.

(3) Irrigation with soaker hose and drip irrigation system is allowed only one day every other week beginning on the second Monday after stage 5 has been declared, on the designated weekday during designated usage times.

(4) Irrigation with hand-held bucket or hand-held hose is allowed only one day per week on the designated weekday during designated usage times.

(5) Irrigation of golf courses and athletic fields is restricted as follows:

a. Irrigation of out-of-play areas such as entryways and areas around clubhouses shall follow general Stage 3 irrigation restrictions.

b. Irrigation of in-play areas shall follow general Stage 3 irrigation restrictions unless an irrigation conservation plan has been submitted and approved by the director. If the general irrigation restrictions are being followed, alternative days may be requested to accommodate field usage schedules

(6) Irrigation of plants in inventory at commercial nurseries is allowed on any day and at any time.

(7) Irrigation of vegetable gardens using hand-held bucket, hand-held hose, soaker hose or drip irrigation is allowed on any day during designated usage times.

(8) Vehicle washing is restricted as follows:

a. Charity car washes are prohibited unless held at a commercial car wash.

b. Non-commercial vehicle washing is prohibited.

c. Commercial vehicle washing is allowed on any day and at any time.

(9) Swimming pools:

a. Swimming pools located outdoors should be covered when not in use to minimize evaporative losses.

b. Filling existing swimming pools is prohibited unless required for health and safety purposes.

c. Filling new swimming pools is prohibited.

d. Make up of existing pools is allowed.

(10) Operation of outdoor aesthetic water features is prohibited.

(11) Washing of impervious surfaces is prohibited unless required for health and safety purposes.

(12) Foundation watering using a drip system, soaker hose or hand-held hose is allowed only one day per week.

(13) Other non-essential water uses are allowed but all reasonable measures shall be taken to limit the use.

Section 86.065. Variances.

(a) The director may grant a variance from the requirements of this article if it is determined that special circumstances exist and that:

(1) compliance with this article adversely affects the health or safety of the public;

(2) compliance with this article can not be technically accomplished; or

(3) alternative methods can be implemented that will achieve the same reduction in water use.

(b) A request for variance will not be considered if submitted after an enforcement action has been taken.

(c) A person may seek a variance from the provisions of this article by filing a written petition for variance with the director. Any petition for variance must include the following information:

(1) Name and address of petitioner(s);

(2) Purpose and location of water use;

(3) Specific provisions of this division for which the petitioner is requesting a variance;

(4) Detailed explanation of how the specific provisions will adversely affect the petitioner(s);

(5) Period of time for which the variance is sought;

(6) Alternative measures the petitioner proposes to implement in order to meet the intent of this division; and

(7) Any other pertinent information as required by the director.

(d) The director will have two weeks from receipt of the petition for variance to review and act upon the request. If no action is taken within two weeks, the request shall be considered denied.

(e) Approved variances shall include a description of the variance and a specific time frame. A copy of the approved variance shall be retained by the petitioner.

(f) A petitioner may appeal a denial of a variance petition to the City Manager. The City Manager will have two weeks from receipt to review and act on an appeal. If no action is taken within two weeks, the appeal shall be considered denied.

Section 86.065-1. Designated weekday variance.

(a) A residential water customer may, by written request to the director, request that the designated weekday be changed to a specified variance day, allowing the residential water customer to use water for the restricted purposes permitted under the drought response plan measures only on the day specified in the variance request. The specified variance day can be any weekday, Saturday, or Sunday.

(b) Upon receipt of a request for a variance the director shall grant the request.

(c) The variance shall expire one year from the date of the written request or upon a change of the residential customer for the utility account at the address specified in the variance.

Section 86.065-2. New landscape variance.

The director may grant a variance from the requirements of this article to allow additional watering days for the establishment of new landscape. New landscape variances may not be issued at any time when Stage 3 or higher is in effect. The director shall develop

and promulgate criteria for the granting of a variance under this section and any forms consistent with such criteria for customers to request a variance.

Section 86.066. Violations.

(a) It shall be unlawful for any person to intentionally, knowingly, recklessly, or with criminal negligence allow or cause any waste of water, to allow or cause landscape watering at any time other than during a prescribed time for landscape watering, or to allow or cause any violation of any provision or restriction of this division.

(b) The director is authorized and instructed to commence any action, in law or in equity, including the filing of criminal charges, deemed necessary for the purpose of enforcing this division. The director may seek civil penalties and any other legal or equitable relief available under common law, Chapter 54 of the Texas Local Government Code or any other applicable city, state or federal code or statute.

(c) It is not a defense to prosecution under any provision of this division that the violation charged is no longer occurring or no longer exists. A judge of the municipal court may not dismiss a complaint or enter a finding of not guilty on the grounds that the violation is no longer occurring or no longer exists.

Section 86.067. Enforcement personnel.

In addition to all peace officers, code enforcement officers, and other persons authorized to enforce city ordinances, the director is authorized to enforce this division by issuing citations to violators, filing complaints in the municipal court, and filing civil enforcement actions.

Section 86.068. Registered water user presumed.

For purposes of this division, in any case where water has been used on a property in violation of this division, it shall be presumed that the person in whose name a water meter connection is registered with the city for the property has intentionally, knowingly, recklessly, or negligently caused or allowed the violation to occur. Proof that the particular premises had a water meter connection registered in the name of the defendant cited in a criminal or civil complaint filed under this division shall constitute *prima facie* evidence that the defendant caused or allowed the violation to occur.

Section 86.069. Additional enforcement remedies.

(a) The director is authorized and instructed to commence any action, in law or in equity, including the filing of criminal charges, necessary to enforce this division.

(b) The director may seek civil penalties and any other legal or equitable relief available under common law, Chapter 54 of the Texas Local Government Code, or any other applicable city, state or federal code or statute necessary to enforce this division.

(c) To the extent allowed by law, the municipal court shall have concurrent jurisdiction over any civil enforcement for violations of this division.

(d) Violations of this division by a customer of the city water system may result in installation of a flow control device on the customer's water line, or termination of the customer's water service.

Section 86.070. Penalties

(a) *Criminal Penalties***:** A person who violates any provision of this division commits a misdemeanor, and upon conviction, shall be punished by a fine in the respective amounts shown:

(1) 1st offense – not less than $100.00 or more than $250.00

(2) 2nd offense – not less than $250.00 or more than $500.00.

(3) 3rd offense – not less than $500.00 or more than $2,000.00.

(b) Each violation of a particular provision of this division shall constitute a separate offense, and each day a violation occurs or continues shall be considered a new offense.

(c) *Civil Penalties.* At the option of the director for each violation of this division a civil notice of violation may be issued in lieu of a criminal citation. Civil penalty assessments shall not exceed one thousand dollars ($1,000.00); however, each violation of a particular section of this division shall constitute a separate violation, and each day a violation continues shall be considered a new violation for purposes of enforcing this division

(1) Civil penalties may be assessed by mailing, certified mail, a notice of violation to the person who is the registered water user at the address of the alleged violation. A notice of violation may also be hand delivered to a person accepting responsibility for premises where the alleged violation occurred. The person receiving the notice shall sign a statement acknowledging receipt of the notice and acquiescence to the procedures stated therein. The notice of violation shall set forth the details of the violation and the proposed penalty.

(2) The registered user, or other person receiving a notice of violation, shall be given ten (10) calendar days from the receipt of a notice of violation to file a written notice to the director requesting an appeal of the violation. If an appeal is not requested within the ten (10) day period, the notice of violation becomes final, and the stated penalty is due.

(3) After the director receives a request for an appeal, the request will be forwarded to the Municipal Court of Record where a hearing on the appeal will be conducted.

(4) The Municipal Court of Record shall have jurisdiction to hear appeals of the assessment of civil penalties. An appeal hearing will be conducted in the same manner as a bench trial for a Class C misdemeanor. At the conclusion of the trial, the Judge may, based on the evidence and testimony, enter an order dismissing, upholding, or amending the penalty that was previously assessed by the director. The order entered by the Municipal Court of Record is a final order on the matter.

(5) A civil penalty assessed against a utility customer for violation of this division may be collected through the utility billing system as part of the consolidated billing system. All such civil penalties are subject to the provisions of Sections 86.199 and 86.200 of the San Marcos Code of Ordinances.

(d) Enforcement personnel may issue verbal and/or written warnings prior to issuance of a citation.

Sec. 86.071. Liability of corporate officers for penalty.

Whenever a corporation or association violates any provision of this division or in a drought response order issued under this division, the president, vice-president, secretary, treasurer, manager or any agent or employee of the corporation or association who is responsible for the violation shall be subject to the penalty prescribed for the violation.

City Code Chapter 14, Buildings and Building Regulations

Article 6, Plumbing Code

DIVISION 2. WATER CONSERVATION

Section 14.120. Definitions.

Terms in this division have the following meanings unless otherwise specified:

Adjustable flow control means a mechanism that can be adjusted to restrict water flow through a valve, thus reducing discharge pressure.

Check valve means a device that allows water to flow in one (1) direction only and prevents flow through the system unless a pre-set pressure has been achieved.

Commercial water customer means a city water customer that uses water for service-related uses such as restaurants, hotels/motels, retail stores, car washes, laundromats/dry cleaners, physician's offices and office buildings.

Conveyor carwash means a commercial car wash that uses a conveyor belt to move vehicles through various washing stations.

Cooling system means a heating, ventilation and air conditioning system that uses water for cooling purposes.

Cycles of concentration means a measure of the number of times the solids content of recirculating water has been increased over that of the make-up water. Example: If the circulating water has four (4) times the solids concentration compared to that of the make up water, then the cycles of concentration is four (4).

Decorative water features means features such as fountains, waterfalls, landscape lakes or ponds, and other aesthetic features where the use is entirely ornamental and serves no other functional purpose.

Director means the director of the Public Services Department, or a person designated by the director to act in his or her behalf, including the water conservation coordinator.

Existing means in existence before September 30, 2006.

Flow sensor means a device that monitors, measures, and/or records the rate of flow of water, and shuts off the system when flows exceed a specified rate.

Flow restrictor means a device which limits the flow of water through an opening.

ICI means an industrial water customer, a commercial water customer, or an institutional water customer.

In-bay automatic carwash means a commercial car wash in which the vehicle remains stationary within a wash bay while automatic arms move back and forth over the vehicle to clean it.

Industrial water customer means a city water customer that uses water for manufacturing and/or fabrication of goods.

Institutional water customer means a city water customer that uses water for institutional facilities such as hospitals, nursing care facilities, child day care facilities, correctional institutions, college/professional schools, elementary/secondary schools, and places of religious assembly.

Irrigation system means an assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location other than agricultural operations as defined by Texas Agricultural Code § 251.002, and/or to reduce dust or control erosion.

Irrigation system evaluation means an inspection of a landscape irrigation system, including a review of design appropriateness for current landscape requirements, proper functioning of sprinkler heads, valves and other components, precipitation rates, irrigation schedules, and maintenance plan.

Irrigation technician means a person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under 30 TAC Chapter 30 (relating to Occupational Licenses and Registrations).

Irrigator means a person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services or supervises the installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under 30 TAC Chapter 30 (relating to Occupational Licenses and Registrations).

Low-angle spray heads means spray heads that direct water droplets closer to the surface of the ground, thus reducing losses to wind drift and evaporation.

Low-head drainage means a condition in which water drains partially or completely out of a lateral line through a sprinkler head after an irrigation cycle is completed.

Master valve means a remote control automatic valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

Mobile carwash means a commercial business equipped with a vehicle or trailer-mounted self-contained washing system with water or detergent solution, storage tank, high pressure/low flow pumping equipment, hoses, spray wand and related appurtenances.

New means installed on or after September 30, 2006.

On-premises laundry facility means a laundry facility located on the premises of a commercial or institutional business, and serving only the customers or residents of that facility. Examples of on-premises laundry facilities include those found at hospitals, nursing homes, and hotels.

Positive shutoff device means a device which permits water to flow through it only when an outside force or pressure is applied to it.

Pre-rinse spray valve means a high-pressure spray attachment used in commercial and institutional kitchens to pre-rinse dishes before loading them into a dishwasher.

Self-service carwash means a commercial car wash in which the vehicle is washed manually within a wash bay by the customer using high-pressure sprayers and brushes.

Shrub riser means a device that elevates a sprinkler head several feet above the ground surface so that water is applied over the top of shrubs and other tall landscape plants.

Single-pass water cooling means a process in which water is circulated only once through a piece of equipment to cool it before being discharged to the waste stream. Single-pass cooling, also known as once-through cooling, is often used for CAT scan, x-ray equipment, degreasers, hydraulic equipment, condensers, air compressors, welding machines, vacuum pumps, ice machines and air conditioners.

Solenoid shutoff valve means a device which opens a valve only when an electrical current is applied, and closes the valve when no current is present.

Static water pressure means the pressure of water when it is not moving.

Subsurface drip means the slow application of water, usually under low pressure, beneath the soil surface.

Surface drip means the slow application of water, usually under pressure, at the soil surface.

Swing joint means a flexible joint or pipe connecting a sprinkler head to a lateral pipe.

Water budget means a feature on a landscape irrigation system controller which allows the user to set a monthly or seasonal water schedule based on evapotranspiration and/or rainfall amounts.

Water recirculating system means a system of pumps, tanks, and treatment components used to treat and reuse water continuously for a single purpose.

Zone valve means an automatic valve that controls a single zone of a landscape irrigation system.

Section 14.121. Car washes.

(a) New conveyer car washes must be equipped with a water recycling system.

(b) New in-bay automatic car washes must use water recycling systems, ultra-low-flow spray nozzles or alternative means to achieve fresh water usage of no more than fifty-five (55) gallons per vehicle.

(c) New and existing self-service and mobile car washes must utilize positive shutoff device spray wands with a flow rate of no more than three (3) gallons per minute.

Section 14.122. Cooling systems.

(a) New cooling systems may not utilize single-pass water cooling for any purpose.

(b) New cooling systems must be designed and operated to achieve a minimum of four (4) cycles of concentration.

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Article 6, Plumbing Code

DIVISION 2. WATER CONSERVATION

Section 14.123. Decorative water features.

(a) New decorative water features must be equipped with a water recirculating system.

(b) Existing decorative water features must be retrofitted with a water recirculating system.

Section 14.124. Dining facilities.

(a) New commercial and institutional garbage disposals must be equipped with flow restrictors and solenoid shutoff valves.

(b) Existing commercial and institutional garbage disposals must be retrofitted with flow restrictors and solenoid shutoff valves.

(c) New commercial and institutional ice machines should be equipped with air-cooled, instead of water-cooled, condensers. If a water-cooled model is used, the cooling system must be equipped with a water recycling system.

(d) Pre-rinse spray valves must be equipped with positive shutoff devices and must meet the 1.6 gallons per minute performance standard established under Texas Health and Safety Code Section 372.005.

Section 14.125. On-premise laundry facilities.

New commercial, industrial and institutional on-premises laundry facilities must be equipped with a water recycling system.

Section 14.126. Landscape irrigation systems.

(a) Landscape irrigation rule. The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, subchapter C, §§ 344.30-344.38, Subchapter D, §§ 344.40-344.43 and Subchapters E and F, §§ 344.50-344.65, Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended, are hereby adopted by reference as the landscape installation irrigation rules of the city.

(b) P2609 Landscape irrigation. The International Residential Code, 2015 Edition, as adopted by the International Code Council, Inc., in cooperation with the International Conference of Building Officials and with all local amendments as previously adopted by the City of San Marcos is hereby amended to add Section P2609 to Chapter 26, General Plumbing Requirements and to read as follows.

(c) Minimum standards for landscape irrigation systems. The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, Subchapter C, §§ 344.30-344.38, Subchapter D, §§ 344.40-344.43 and Subchapters E and F, §§ 344.50-344.65 Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended, are hereby adopted by reference as the landscape installation irrigation rules of the city.

(d) Valid license required and exemptions.

(1) Any person who connects an irrigation system to the water supply within the City or the City's extraterritorial jurisdiction (ETJ), must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903, Subchapter F of the Texas Occupations Code, or as defined by Title 22, Chapter 365 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code.

(2) A property owner is not required to be licensed in accordance with Texas Occupations Code, Title 12, § 1903.002(c)(1) if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person's home. A home or property owner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344, Sections:
344.50 (Backflow Prevention Methods),
344.51 (Specific Conditions and Cross-Connection Control),
344.52 (Installation of Backflow Prevention Device),
344.60 (Water Conservation),
344.61 (Minimum Standards for the Design of the Irrigation Plan, except (c)(1) and,
344.62 (Minimum Design and Installation Requirements, except (o).

(3) Upon completion of the irrigation system, the home or property owner must prepare and retain an irrigation plan that shows the actual installation of the system.

(4) As provided in the Texas Occupations Code § 1903.002 for other exemptions to the licensing requirement.

(e) Permit required and exemptions.

(1) Any person installing an irrigation system within the territorial limits or extraterritorial jurisdiction of the City is required to obtain a permit from the City. Any plan approved for a permit must be in compliance with the requirements of this chapter. The permit will be issued by the permit center, a divisions of Planning and Development Services.

(2) The permitting requirements do not apply to:

a. An irrigation system that is an on-site sewage disposal system, as defined by Section 366.002, Health and Safety Code; or

b. An irrigation system used on or by an agricultural operation as defined by Section 251.002, Agriculture Code; or

c. An irrigation system connected to a groundwater well used by the property owner for domestic use.

(f) Backflow prevention methods and devices. All Irrigation systems must comply with the adopted City of San Marcos ARTICLE 9 - Cross Connection Control and Backflow Prevention Requirements.

(g) Water conservation. All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation.

(h) Design and installation.

(1) Irrigation plan design and installation shall meet the minimum standards and rules of the Texas Administrative Code.

(2) Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903 of the Texas Occupations Code, or as defined by Chapter 365, Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code, shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not onsite, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

(3) Completion, maintenance, alteration, repair, or service of irrigation systems shall comply with the landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, Subchapter C, §§ 344.30-344.38, Subchapter D, §§ 344.40-344.43 and Subchapters E and F, §§ 344.50-344.65 Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended.

(i) In addition to the requirements under 30 TAC Chapter 344, all new landscape irrigation systems must be designed, installed and operated in accordance with the following requirements:

(1) Above-ground emission devices must be attached to lateral lines with flexible pipe or swing joints.

(2) Use of shrub risers is prohibited. Surface or subsurface drip irrigation, or low-angle spray heads that direct water to the base of the plant may be used in lieu of shrub risers.

(3) Irrigation controllers must be capable of providing multiple irrigation programs, with at least three (3) start times per program.

(4) Irrigation controllers must be capable of limiting irrigation frequency to once every seven (7) days and once every fourteen (14) days as per drought restrictions.

(5) Irrigation controllers must have a water budgeting feature.

(6) Landscape irrigation systems must have a master valve.

(7) Zone valves must be equipped with an adjustable flow control.

(8) Zone valves must be enclosed in an accessible valve box.

(9) Check valves are required where elevation differences may result in low-head drainage. Check valves may be located at the sprinkler head(s) or on the lateral line.

(j) All new ICI and multi-family residential landscape irrigation systems must also be designed, installed and operated in accordance with the following requirements:

(1) A separate metered water service must be utilized for the landscape irrigation system.

(2) Landscape irrigation systems must be equipped with a flow sensor that will automatically shut down the irrigation system during excessive water flows.

(3) Landscape irrigation systems must be equipped with a freeze sensor that will automatically shut down the irrigation system when ambient temperatures fall below 32 degrees F.

(4) An irrigation system evaluation must be conducted at least once per year, and the results of the evaluation shall be provided to the director.

(k) All existing landscape irrigation systems must be retrofitted with a rain shutoff device or soil moisture shutoff device.

(l) Existing ICI and multi-family residential landscape irrigation systems must have an irrigation system evaluation conducted at least once per year, and the results of the evaluation shall be provided to the director.

(m) Reclaimed water. Reclaimed water may be utilized in landscape irrigation systems if:

(1) There is no direct contact with edible crops, unless the crop is pasteurized before consumption;

(2) The irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;

(3) The irrigation system is installed using purple components;

(4) The domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with Title 30, Texas Administrative Code, Section 290.47(i) (relating to Appendices);

(5) A minimum of an eight-inch by eight-inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER — DO NOT DRINK" and "AGUA DE RECUPERACION — NO BEBER"; and

(6) Backflow prevention on the reclaimed water supply line shall be in accordance with the regulations of the city's water provider.

(n) Items not covered by this article. Any item not covered by this ordinance and required by law shall be governed by the Texas Occupations Code, the Texas Water Code, Title 30 of the Texas Administrative Code, City of San Marcos Plumbing Code and any other applicable state statute or Texas Commission on Environmental Quality rule.

(o) Enforcement.

(1) The city shall have the power to administer and enforce the provisions of this chapter as may be required by governing law. Any person, firm, corporation or agent who shall violate a provision of this code, or fails to comply therewith, or with any of the requirements thereof, is subject to suit for injunctive relief as well as prosecution for criminal violations. Any knowing violation of the elements of this ordinance as codified in the City Code is declared to be a nuisance.

(2) The city water purveyor can suspend utility service for any violation of this article.

(3) Any person who knowingly violates any provision of this section shall, upon conviction, be fined as provided in chapter 1, subsection 1.015 of the San Marcos Code.

(4) An offense under this section is a Class C misdemeanor.

(5) Nothing in this section shall be construed as a waiver of the City's right to bring a civil action to enforce the provisions of this section, or any other building code violation, and to seek remedies as allowed by law, including, but not limited to the following:

a. Injunctive relief to prevent specific conduct that violates the ordinance or to require specific conduct that is necessary for compliance with the ordinance; and

b. Other available relief.

(6) Whenever a corporation or association violates any provision of this section, the president, vice-president, secretary, treasurer, manager or any agent or employee of the corporation or association who is responsible for the violation shall be subject to the penalty prescribed for the violation.

(p) Fees. The City Council, by separate ordinance, may create a schedule of fees for obtaining and renewing an irrigation permit. These fees will be in amounts sufficient to cover the city's costs in issuing and renewing the permits, including, but not limited to, staff time and other costs.

APPENDIX B:

SAN MARCOS WATER AND WASTEWATER RATE SCHEDULES

Water Rates and Fees

Water Rates

(All water rates are based per 1,000 gallons)

Inside-City

Lifeline Rate	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 6,000 gallons - Minimum	22.06	23.16
6,001 - 9,000	6.47	6.79
9,001 - 12,000	7.40	7.77
12,001 - 20,000	8.33	8.74
20,001 - 50,000	9.24	9.70
Over 50,000	11.09	11.64
5/8" - 3/4" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	22.06	23.16
0 - 6,000	3.70	3.88
6,001 - 9,000	6.47	6.79
9,001 - 12,000	7.40	7.77
12,001 - 20,000	8.33	8.74
20,001 - 50,000	9.24	9.70
Over 50,000	11.09	11.64
1" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	55.15	57.90
0 - 4,000	2.38	2.50
4,001 - 10,000	2.87	3.01
10,001 - 25,000	7.15	7.51
Over 25,000	8.11	8.51
1 1/2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	110.29	115.81
0 - 8,000	2.38	2.50
8,001 - 10,000	2.87	3.01
10,001 - 25,000	7.15	7.51
Over 25,000	8.11	8.51
2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	176.46	185.29
0 - 13,000	2.38	2.50
13,000 - 25,000	7.15	7.51
Over 25,000	8.11	8.51

Outside-City

Lifeline Rate	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 6,000 gallons - Minimum	27.58	28.96
6,001 - 9,000	8.09	8.49
9,001 - 12,000	9.24	9.70
12,001 - 20,000	10.40	10.91
20,001 - 50,000	11.55	12.13
Over 50,000	13.87	14.56
5/8" - 3/4" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	27.58	28.96
0 - 6,000	4.63	4.86
6,001 - 9,000	8.09	8.49
9,001 - 12,000	9.24	9.70
12,001 - 20,000	10.40	10.91
20,001 - 50,000	11.55	12.13
Over 50,000	13.87	14.56
1" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	68.93	72.38
0 - 4,000	2.98	3.13
4,001 - 10,000	3.57	3.75
10,001 - 25,000	8.95	9.39
Over 25,000	10.13	10.64
1 1/2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	137.87	144.76
0 - 8,000	2.98	3.13
8,001 - 10,000	3.57	3.75
10,001 - 25,000	8.95	9.39
Over 25,000	10.13	10.64
2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	220.58	231.61
0 - 13,000	2.98	3.13
13,001 - 25,000	8.95	9.39
Over 25,000	10.13	10.64

Wholesale Water

	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Rate per 1,000 gallons	4.79	5.03

Reclaimed Water

	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Minimum Charge	298.10	313.01
Rate per 1,000 gallons	1.56	1.64

Other Water Charges/Fees

Description	Oct. 1, 2018 Rate (effective Oct 1, 2013)
New Account Charge - Normal Hours	40.00
New Account Charge - After Hours**	100.00
New Service - Normal Hours	Meter Cost + 50.00
Reconnect Charge - Normal Hours	40.00
Reconnect Charge - After Hours**	170.00
Customer Requested Outage/Service - Normal Hours	50.00
Customer Requested Outage/Service - After Hours**	100.00
Temporary Water Meter	Deposit - 750.00 Installation - 75.00 Monthly Rental - 100.00
Meter Test Charge	35.00
Tampering Fee	350.00
Water Tap	*

- Service fees established by City Code 86.198
* Actual construction costs plus 10%. Minimum charge of $250.00
** After Hours is consider 4 p.m. Central Daylight Time

Other Fees

Description	Rate
NSF Check Charge	30.00
Confidential Fee	5.00

Wastewater Rates

Sewer Rates

(All sewer rates are based per 1,000 gallons of metered water consumption)

Inside-City

Lifeline Rate	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Maximum	25.01	25.51
5/8" - 3/4" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 2,000 - Minimum	25.01	25.51
Over 2,000	7.21	7.36
1" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 4,000 - Minimum	49.95	50.95
Over 4,000	7.21	7.36
1 1/2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 8,000 - Minimum	99.87	101.87
Over 8,000	7.21	7.36
2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 13,000 - Mimimum	159.82	163.02
Over 13,000	7.21	7.36

Outside-City

Lifeline Rate	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
Maximum	31.26	31.89
5/8" - 3/4" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 2,000 - Minimum	31.26	31.89
Over 2,000	9.00	9.18
1" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 4,000 - Minimum	62.42	63.67
Over 4,000	9.00	9.18
1 1/2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 8,000 - Minimum	124.84	127.33
Over 8,000	9.00	9.18
2" Water Meter	Oct. 1, 2017 Rate	**Oct. 1, 2018 Rate**
First 13,000 - Minimum	199.77	203.76
Over 13,000	9.00	9.18

Residential Sewer Rates for 5/8-3/4", 1", 1 1/2" water meters are based on the average water consumption for the bills dated the previous December, January and February. Accounts that do not have water usage history for December, January or February are set at 5,000 gallons.

No additional charge is applied to Single-Family residential customers for wastewater volumes in excess of 9,000 gallons for 5/8-3/4", 1", 1 1/2" water meters.

Sewer Surcharge Rate

COD Concentration (milligram per Liter)	Oct. 1, 2017 Rate (per pound)	**Oct. 1, 2018 Rate (per pound)**
351 to 500	$0.098	$0.100
501 to 600	$0.162	$0.165
Over 600	$0.328	$0.335

Other Sewer Charges

Description	**Oct. 1, 2018 Rate**
Sewer Tap Charge	*

*Actual construction costs plus 10%. Minimum charge of $250.00

Other Fees

Description	**Rate**
NSF Check Charge	30.00
Confidential Fee	5.00

APPENDIX C:

MAP OF SAN MARCOS WATER SERVICE AREA

Water Distribution CCN

0 2,500 5,000 10,000 Feet

1 inch = 5,000 feet

W CENTERPOINT RD

RANCH ROAD 12

W MCCARTY LN

E MCCARTY LN

W WONDER WORLD DR

WONDER WORLD DR

N LBJ DR

W SESSOM DR

W HOPKINS ST

E HOPKINS ST

S LBJ DR

HUNTER RD

35

S OLD BASTROP HWY

FM 110

REDWOOD RD

STAPLES RD

N OLD BASTROP HWY

CENTERPOINT RD

123

21

80

City of San Marcos
Public Services Department
Water / Wastewater Division
630 E. Hopkins St.
San Marcos, TX 78666

Water Distribution CCN

APPENDIX D:

SAN MARCOS UTILITY SURVEY

Texas Water Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

CONTACT INFORMATION

Name of Utility: City of San Marcos

Public Water Supply Identification Number (PWS ID): TX1050001

Certificate of Convenience and Necessity (CCN) Number: 10298

Surface Water Right ID Number:

Wastewater ID Number: 20116

Contact: First Name: JAN Last Name: KLEIN

Title: CONSERVATION COORDINATOR

Address: 630 EAST HOPKINS City: SAN MARCOS State: TX

Zip Code: 78666 Zip+4: Email: jklein@sanmarcostx.gov

Telephone Number: 5123938310 Date: 4/4/2019

Is this person the designated Conservation Coordinator? (•) Yes ( ) No

Regional Water Planning Group: L

Groundwater Conservation District:

Our records indicate that you:

☑ Received financial assistance of $500,000 or more from TWDB

☑ Have 3,300 or more retail connections

☐ Have a surface water right with TCEQ

A. Population and Service Area Data

1. Current service area size in square miles: 54

Attached file(s):

File Name	File Description
CCN Map.pdf	San Marcos Water Distribution CCN (PDF)

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. Historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2018	71,153	0	65,278
2017	68,668	12	62,998
2016	62,969	14	57,769
2015	58,292	3,288	53,478
2014	59,542	3,176	54,625

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2020	73,690	0	65,278
2030	84,861	0	77,854
2040	101,235	0	92,876
2050	120,769	0	110,797
2060	144,072	0	132,176

4. Described source(s)/method(s) for estimating current and projected populations.

These projections are based off of the 2010 census population for the Water Service Area and 2021 Region L Water Plan projections of 1.78% growth per year.

Texas Water Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. System Input

System input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2018	2,966,235,294	0	4,126,633	2,962,108,661	114
2017	2,776,959,677	0	420,219	2,776,539,458	111
2016	2,689,842,843	0	197,350	2,689,645,493	117
2015	2,632,218,218	0	477,861	2,631,740,357	124
2014	230,843,687	2,240,796,000	156,700	2,471,482,987	114
Historic Average	2,259,219,944	448,159,200	1,075,753	2,706,303,391	116

C. Water Supply System

1. Designed daily capacity of system in gallons: 23,533,920

2. Storage Capacity

   2a. Elevated storage in gallons: 3,271,000

   2b. Ground storage in gallons: 8,360,000

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Projected Demands

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demand (gallons)
2020	73,690	10,442
2021	75,002	10,628
2022	76,337	10,723
2023	77,695	10,914
2024	79,078	11,010
2025	80,486	11,107
2026	81,919	11,305
2027	83,377	11,403
2028	84,861	11,606
2029	86,371	11,813

2. Description of source data and how projected water demands were determined.

For population used 2021 Region L Water Plan projections of 1.78% growth per year. For Demand used population projections and GPCD targets.

E. High Volume Customers

1. The annual water use for the five highest volume **RETAIL customers.**

Customer	Water Use Category	Annual Water Use	Treated or Raw
BROOKFIELD RESIDENTIAL	Commercial	28,255,670	Treated
THE RETREAT	Commercial	26,928,433	Treated
ZCP OUTPOST LLC	Commercial	21,315,400	Treated
RESCARE INC	Commercial	18,088,546	Treated
COPPER BEECH TOWNHOMES LLC	Commercial	17,652,590	Treated

2. The annual water use for the five highest volume **WHOLESALE customers.**

Customer	Water Use Category	Annual Water Use	Treated or Raw
CITY OF KYLE	Municipal	4,093,719	Treated

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

F. Utility Data Comment Section

Additional comments about utility data.

Section II: System Data

A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	9,272	30.19 %
Residential - Multi-Family	19,589	63.78 %
Industrial	35	0.11 %
Commercial	1,433	4.67 %
Institutional	382	1.24 %
Agricultural	0	0.00 %
Total	30,711	100.00 %

2. Net number of new retail connections by water use category for the previous five years.

	Net Number of New Retail Connections						
Year	**Residential - Single Family**	**Residential - Multi-Family**	**Industrial**	**Commercial**	**Institutional**	**Agricultural**	**Total**
2018	426	170	1	25	3	0	625
2017	375	52	1	66	1	0	495
2016	744	522	2	44	17	0	1,329
2015	170	44	0	27	13	0	254
2014	441	1,152	1	96	22	0	1,712

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2018	547,509,987	917,605,972	297,404,857	620,336,591	225,111,780	0	2,607,969,187
2017	541,777,083	939,440,529	42,272,477	488,753,280	259,615,557	0	2,271,858,926
2016	489,542,957	943,113,099	44,953,223	395,872,105	216,528,616	0	2,090,010,000
2015	513,660,189	989,501,224	47,246,259	415,391,499	227,184,829	0	2,192,984,000
2014	507,481,611	909,310,077	49,901,433	369,183,816	204,363,064	0	2,040,240,001

C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

Year	Residential - Single Family	Residential - Multi-Family	Total Residential
2018	56	0	56
2017	60	0	60
2016	62	0	62
2015	67	0	67
2014	65	0	65
Historic Average	62	0	62

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Annual and Seasonal Water Use

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	234,557,000	218,022,000	231,545,000	206,083,000	192,748,000
February	206,267,000	201,083,000	223,900,000	188,434,000	175,295,000
March	233,741,000	223,393,000	218,146,000	202,441,000	190,915,000
April	244,060,000	219,078,000	211,071,000	191,478,000	197,377,000
May	256,016,000	226,648,000	209,775,000	192,362,000	200,546,000
June	265,941,000	237,015,000	214,166,000	199,886,000	195,585,000
July	263,844,000	271,653,000	263,491,000	227,811,000	232,158,000
August	291,054,000	240,237,000	235,475,000	274,778,000	243,703,000
September	252,663,000	224,496,000	220,938,000	251,961,000	215,844,000
October	255,507,000	220,919,000	229,587,000	250,154,000	225,455,000
November	241,636,000	237,918,000	211,895,000	218,583,000	205,009,000
December	229,848,000	234,282,000	217,164,000	230,998,000	196,543,000
Total	2,975,134,000	2,754,744,000	2,687,153,000	2,634,969,000	2,471,178,000

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2018	2017	2016	2015	2014
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
2018	820,839,000	2,975,134,000
2017	748,905,000	2,754,744,000
2016	713,132,000	2,687,153,000
2015	702,475,000	2,634,969,000
2014	671,446,000	2,471,178,000
Average in Gallons	731,359,400.00	2,704,635,600.00

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2018	154,365,912	6	5.21 %
2017	248,323,495	10	8.94 %
2016	521,388,809	23	19.39 %
2015	394,463,672	19	14.99 %
2014	239,656,675	11	9.70 %
Average	311,639,713	14	11.65 %

F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2018	8,151,052	8922163	1.0946
2017	7,547,243	8140271	1.0786
2016	7,362,063	7751434	1.0529
2015	7,219,093	7635597	1.0577
2014	6,770,350	7298326	1.0780

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	519,994,365	30.19 %	23.21 %
Residential - Multi-Family	939,794,180	63.78 %	41.94 %
Industrial	96,355,649	0.11 %	4.30 %
Commercial	457,907,458	4.67 %	20.44 %
Institutional	226,560,769	1.24 %	10.11 %
Agricultural	0	0.00 %	0.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

H. System Data Comment Section

Section II.D.2 - COSM does not provide raw water to retail customers.

Section III: Wastewater System Data

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 9

2. List of active wastewater connections by major water use category.

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	0	9,267	9,267	85.96 %
Industrial	0		0	0.00 %
Commercial	0	1,514	1,514	14.04 %
Institutional	0		0	0.00 %
Agricultural	0	0	0	0.00 %
Total	0	10,781	10,781	100.00 %

3. Percentage of water serviced by the wastewater system: 92.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	125,032,000	149,050,000	145,720,000	155,353,000	147,707,000
February	135,629,000	147,834,000	145,471,000	133,635,000	125,054,000
March	154,165,000	175,195,000	151,576,000	159,134,000	152,070,000
April	142,709,000	185,299,000	171,097,000	166,685,000	130,020,000
May	123,787,000	134,608,000	174,468,000	208,717,000	135,400,000
June	98,710,000	134,608,000	146,068,000	180,980,000	121,320,000
July	101,521,000	99,232,000	114,381,000	161,182,000	116,379,000
August	92,267,000	142,168,000	132,683,000	154,287,000	140,999,000
September	152,829,000	141,425,000	133,681,000	132,530,000	124,951,000
October	177,860,000	128,444,000	130,512,000	141,486,000	129,804,000
November	150,384,000	122,103,000	136,961,000	161,762,000	134,002,000
December	168,662,000	139,200,000	156,219,000	143,531,000	136,699,000
Total	1,623,555,000	1,699,166,000	1,738,837,000	1,899,282,000	1,594,405,000

5. Could treated wastewater be substituted for potable water?

(●) Yes ( ) No

B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	97,713,816
Landscape irrigation (park,golf courses)	9,974,234
Agricultural	
Discharge to surface water	
Evaporation Pond	
Other	
Total	107,688,050

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

Section III.A.2 - All wastewater connections are unmetered, but wastewater usage is based on metered water usage data. Municipal Connections includes single-family residential; Commercial Connections includes everything except single-family residential.

APPENDIX E:

RESOLUTION OF ADOPTION OF WATER CONSERVATION AND DROUGHT RESPONSE PLANS

RESOLUTION NO. 2019-70R

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN MARCOS, TEXAS APPROVING THE SUBMITTAL OF THE 2019 REVISED WATER CONSERVATION PLAN AND REVISED 2019 DROUGHT RESPONSE PLAN TO THE TEXAS WATER DEVELOPMENT BOARD; AND DECLARING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SAN MARCOS, TEXAS:

PART 1. The attached 2019 Water Conservation Plan and the 2019 Drought Response Plan are hereby approved for submittal to the Texas Water Development Board.

PART 2. This Resolution shall be in full force and effect immediately from and after its passage.

ADOPTED on April 16, 2019.

Jane Hughson
Mayor

Attest:

Jamie Lee Case
~~City~~ Clerk