CITY OF LLANO, TEXAS

WATER CONSERVATION
AND
DROUGHT CONTINGENCY PLAN
ORDINANCE NO. 1467

JULY 2022 DROUGHT PLAN

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WATER CONSERVATION PLAN

INTRODUCTION

The City of Llano (the "City" or "Llano") has prepared and adopted this Water Conservation and Drought Contingency Plan (WCDC Plan Ordinance No. 1035) pursuant to the requirements of Texas Administrative Code Chapter 288, Water Conservation Plans, Guidelines, and Requirements. This WCDC Plan will be submitted to the Texas Water Development Board (TWDB), Texas Commission on Environmental Quality (TCEQ) and the Lower Colorado River Authority (LCRA) for review and approval. This WCDC Plan may be amended in the future as required by State law and/or by the City.

WATER CONSERVATION PLAN GOALS

The purpose of this water conservation plan is to comply with the requirements contained in the Texas Administrative Code Chapter 288, Water Conservation Plans, Guidelines and Requirements:

- Long-term reductions in overall water demands by 10 % per capita over the next ten years;
- Reductions in the magnitude of seasonal water demands by 5% per capita over the next five years; and
- Reductions in wastewater flow volumes by 1% per capita over the next five years.

Given current and projected water and wastewater service requirements and issues; specific water conservation objectives are:

- To reduce waste and promote conservation habits of the residents of City of Llano.
- To reduce seasonal water demands such that future expansions of water treatment facilities can be deferred; and
- To continue to investigate the feasibility of reusing wastewater for suitable non-potable uses (e.g., irrigation of public green space and private landscaping).

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WATER CONSERVATION GOALS

Water Conservation Plan				
5- and 10-yr Goals for Water Savings				
	Historic 5yr Average	Baseline	5-yr Goal For year 2024	10-yr goal for year 2029
Total GPCD	187	187	177	168
Residential GPCD	97	97	92	87
Water Loss (GPCD)	16	16	15	14
Water Loss (Percent)	10.68%	10.68%	10.15%	9.61%

2014 Goals Update	**2014**	**2015**	**2016**	**2017**	**2018**
Population	3232	3325	3325	3325	3325
Pumping Total	224,503,000	237,650,000	215,415,000	224,396,000	225,292,000
Average / capita (GPCD)	190	196	177	185	186
Seasonal / capita (GPCD)	189	196	212	210	191
Wastewater/capita (GPCD)	94	84	76	76	75
Water loss (Percent)	10.52	8.29	9.99	7.64	16.94
Percent Reduction	-14.78%	-5.86%	9.36%	-4.17%	-0.40%

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UTILITY PROFILE

The City of Llano gets it raw water supply from the Llano River (the "River"). The Llano River originates from springs near Edwards, Sutton and Kimble Counties west of Junction, Texas, and flows east to the Colorado River. The City has two dams constructed on the River creating two lakes known as Robinson Lake and Llano Lake. The City holds two Water Rights Permits totaling 1,700 Ac-Ft/Yr.

The raw water is removed from Llano Lake and treated by a 3MGD Water Treatment Plant placed into service in June 2000. The water is stored in one of four tanks.

- Clear Well – 500,000 gal.
- Tank #1 – 1,000,000 gal.
- Tank #2 – 300,000 gal.
- Elevated Tank #3 – 200,000 gal.
- Elevated Tank #4 – 200,000 gal.

The service area is 4.5 square miles serving approximately 3,325 people. See Appendix A for service area map.

The estimated population growth for Llano is expected to be slow according to studies performed by various groups. For example, the Senate Bill 1 Planning Group estimates the population in Llano will not exceed 3,500 people until the year 2040. However, this region of the State of Texas is growing faster than had been expected and the City is planning for a faster growth rate. The City is using a population of 3500 people by the year 2023 for its projected growth.

CURRENT WATER AND WASTEWATER STATISTICS

Total Unaccounted for Water

Year	*Amount (gal.)*	*%*
2014	23,854,224	10.52
2015	17,223,109	8.29
2016	20,952,307	9.99
2017	15,968,117	7.64
2018	36,363,910	16.94

Municipal Water Average Per Capita (gpcd)

Year	*Total Treated*	*Population*	*Per Capita Use*
2014	224,503,000	3232	190
2015	237,650,000	3325	196
2016	215,415,000	3325	177
2017	224,396,000	3325	185
2018	225,292,000	3325	186

Summer Water Average (gpcd)

Year	*Summer Total Treated*	*Population*	*Summer Per Capita Use*
2014	55,446,700	3232	189
2015	59,246,100	3325	196
2016	64,255,500	3325	212
2017	63,405,600	3325	210
2018	57,895,600	3325	191

Winter Water Average (gpcd)

Year	*Winter Total Treated*	*Population*	*Winter Per Capita Use*
2014	29,368,549	3232	101
2015	32,777,100	3325	110
2016	35,877,101	3325	119
2017	33,035,000	3325	110
2018	32,399,800	3325	108

Annual Peak-to-Average Daily Use Ratio

Year	*Average MGD*	*Peak MGD*	*Ratio (peak/avg)*
2014	0.617	1.126	1.82
2015	0.649	1.654	2.55
2016	0.589	1.482	2.52
2017	0.615	1.068	1.74
2018	0.623	1.168	1.87

Municipal Wastewater Average Per Capita (gpcd)

Year	*Total Treated*	*Population*	*Per Capita Use*
2014	113,884,896	3232	94
2015	101,724,410	3325	84
2016	91,870,373	3325	76
2017	91,722,498	3325	76
2018	91,046,188	3325	75

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Summer Wastewater Average (gpcd)

Year	*Summer Total Treated*	*Population*	*Summer Per Capita Use*
2014	27,042,202	3232	92
2015	23,479,849	3325	78
2016	22,764,544	3325	75
2017	22,471,941	3325	74
2018	20,458,019	3325	68

Winter Wastewater Average (gpcd)

Year	*Winter Total Treated*	*Population*	*Winter Per Capita Use*
2014	30,541,750	3232	105
2015	29,352,260	3325	98
2016	25,026,995	3325	83
2017	23,042,585	3325	77
2018	22,896,280	3325	77

WATER SYSTEM UTILITY PROFILE

In 2018, the per capita per day usage was 186 gallons per day. In 2018, the winter per capita per day use was 108 gallons per day. In 2018, the summer per capita per day use was 191 gallons per day. Residential meters represent 78% of the City of Llano's active water connections. Commercial connections represent 18% of the City of Llano's active water connections. Institutional meters represent 4% of the City of Llano's active water connections.

The City's water treatment facilities' current capacity is rated at 2,083 gallons per minute (gpm) or 3.0 million gallons per day (MGD).

Total water storage capacity of the City is 2.2 million gallons, of which .400 million gallons are considered elevated storage. In 2018, average daily water demand for the City was .623 MGD. The peak daily water demand for 2018 was 1.168 MGD. The distribution capacity is 3,400 gpm and provides potable water to eight pressure zones within the City. In high pressure areas of the distribution system greater than 110 psi, pressure reducer valves have been installed. Pressure reducers can be installed on homes where service pressure is greater than 80 psi by a licensed plumber.

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WASTEWATER SYSTEM PROFILE

Eighty-six percent (86%) of the City's water customers are also served by the City's wastewater system. The remaining fourteen percent (14%) utilizes private on-site wastewater disposal systems (i.e., septic tank systems). The City operates its Activated Sludge wastewater treatment facility at the current permitted capacity 0.600 MGD. The average daily flow for 2018 was 0.250 MGD. The peak monthly wastewater flow for the 2018 period was 0.999 MGD. All the City's wastewater effluent is applied to irrigation for hay field production.

PUBLIC EDUCATION

The City will promote water conservation issues by informing the public in a variety of ways including:

- new customers will receive water conservation information;
- water conservation information will be available upon request;
- community educational program / school demonstrations and presentations;
- staff lectures and professional presentations are provided to local civic groups and organizations;
- articles are published in the City's newsletter on water conservation;
- retrofitting older homes with new plumbing; and
- lawn and garden shows will be held in early spring to promote water conservation.

The City provides customers with information from American Water Works Association, Texas Water Development Board and other sources related to water conservation and environmental issues that affect our water on the City's website and through a newsletter.

Additionally, the City provides an opportunity for customers to learn about water conservation at an annual Lawn and Garden Show held in the City. Information, conservation related prizes, and hands-on demonstrations are provided at this event.

PLUMBING CODES

The City has adopted most current edition that is on file of the International Plumbing Code, which requires water saving fixtures to be installed in new construction and in the replacement of plumbing in existing structures.

RETROFIT PROGRAMS

The City SHALL educate the residents, plumbers, and contractors on the benefits of retrofitting existing facilities with water saving devices. This program will be included in the educational and informational programs utilized by the City. The City will contact all plumbing companies and hardware stores in the Llano area to encourage them to stock water conserving fixtures including retrofit devices. In early spring, the City will post water conservation tips for the customers online and through newspaper articles.

UNIVERSAL METERING

All treatment facilities, irrigation, parks, and municipal structures operated by the City of Llano are now being metered.

The City has replaced all water meters with electronic radio read meters capable of reading water flow down to a tenth of a gallon.

WATER CONSERVING LANDSCAPE

The City of Llano will provide information, through the public education program, to homeowners, business owners, landscape architects, and irrigation contractors about the methods and benefits of water conserving landscaping practices and devices. The following methods will be encouraged:

- The use of low water consuming plants and grasses for landscaping new homes and commercial areas.
- The use of drip irrigation systems when possible or other water conserving irrigation systems that utilize efficient sprinklers and considerations given to prevailing winds.
- The use of ornamental fountains that recycle water and use a minimum amount of water.

In addition, the City will encourage business and nurseries to offer for sale low water consuming plants and grasses along with efficient irrigation systems and promote their use through demonstrations and advertisements.

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RATE STRUCTURES OF WATER AND WASTEWATER

Water Rates:

a) Water rates for all customers served by the City SHALL be as follows:

Consumption	0 to 3,000 gallons	3,000 to 12,000 gallons	12,000 to 50,000 gallons	> 50,000 gallons
Rate	included in base charge	$2.30 per 1,000 gallons	$4.03 per 1,000 gallons	$5.75 per 1,000 gallons

Minimum base charges inside City Limits	
Meter Size	**Rate**
3/4"	$42.00
1"	$51.00
1 1/2 "	$60.00
2"	$84.75
3"	$267.00
4"	$334.50
6"	$492.00

One dollar ($1.00) has been added to each customer's monthly charge for water for contributing to the Council Restricted Sinking Fund.

b) Water rates for apartment units which have individual water meters SHALL be the same as Section a) directly above.

c) Water rates for apartment complexes which are metered as one customer SHALL be calculated as follows:

THE MINIMUM BASE CHARGE FOR A ¾" METER SIZE WILL BE BILLED FOR EACH UNIT AND THE GALLONS INCLUDED IN THE BASE CHARGE WILL BE DETERMINED BY MULTIPLYING 3,000 GALLONS TIMES THE NUMBER OF APARTMENT UNITS.

Multi – Family units or Apartments may, with permission of the City, install City specified locking cut-offs for individual units. Rates SHALL be calculated as noted in this section with the minimum base charge calculated using the number of occupied units. Service fees for lockable cut offs SHALL be the same as if metered.

d) Water rates for customers outside the city limits SHALL calculated as the sum of the "minimum base charges inside city limits" for a ¾" meter size plus the "minimum base charges inside city limits" for the applicable meter size.

All rates are to be considered net. Gross rates are 10% higher. If the current monthly bill is not paid within ten (10) days from the date of billing, the gross rate SHALL apply.

Wastewater Rates:

a) Wastewater rates for residential customers SHALL be based on the average water consumption of individual customers for the months of December, January, and February, to be recalculated each March. Rates SHALL be:
$68.00 per first 2,000 gallons of water consumed per month, plus
$01.81 per 1,000 gallons for the next 2,001-25,000 gallons consumed per month
$02.16 per 1,000 gallons for the next 25,001-50,000 gallons consumed per month
$02.52 per 1,000 gallons for the next 50,001-100,000 gallons consumed per month
$02.88 per 1,000 gallons for the next 100,001-200,000 gallons consumed per month
$03.25 per 1,000 gallons for the next 200,001-300,000 gallons consumed per month
$03.60 per 1,000 gallons consumed over 300,000 gallons.

b) Wastewater rates for apartment complexes which are metered as one customer SHALL be calculated as follows:
$68.00 times the number of apartment units, plus
$01.81 per 1,000 gallons for the next 2,001-25,000 gallons consumed per month
$02.16 per 1,000 gallons for the next 25,001-50,000 gallons consumed per month
$02.52 per 1,000 gallons for the next 50,001-100,000 gallons consumed per month
$02.88 per 1,000 gallons for the next 100,001-200,000 gallons consumed per month
$03.25 per 1,000 gallons for the next 200,001-300,000 gallons consumed per month
$03.60 per 1,000 gallons consumed over 300,000 gallons.

c) Commercial and Industrial wastewater rates SHALL be based on the average water consumption of individual customers for the months of December, January, and February, to be recalculated each March. The average SHALL be used to define rates as follows:

Minimum Charge per first 2,000 gallons $84.00

$01.81 per 1,000 gallons for the next 2,001-25,000 gallons consumed per month
$02.16 per 1,000 gallons for the next 25,001-50,000 gallons consumed per month
$02.52 per 1,000 gallons for the next 50,001-100,000 gallons consumed per month
$02.88 per 1,000 gallons for the next 100,001-200,000 gallons consumed per month
$03.25 per 1,000 gallons for the next 200,001-300,000 gallons consumed per month
$03.60 per 1,000 gallons consumed over 300,000 gallons

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LEAK DETECTION AND WATER AUDITS

The City of Llano has aggressively pursued a leak detection and repair program and has in inventory all necessary repair materials needed to ensure prompt repairs of all leaks detected or reported.

A monthly water loss report provides an effective tracking system of metered production, metered consumption, accounted water losses, and unaccountable water loss. The City maintains an average annual unaccountable rate of equal to or less than eleven percent (11%) of the produced water.

IMPLEMENTATION AND ENFORCEMENT

An Ordinance adopting the Water Conservation Plan SHALL authorize the City to implement, enforce, and administer the Ordinance. The City Council adopted the Ordinance on 11th day of July, 2022.

CONTRACTS WITH OTHER POLITICAL SUBDIVISIONS

The City will, as part of the contract to wholesale water to any other entity that will re-sell water, require that entity to adopt a water conservation and drought contingency plan in accordance to the LCRA's current water conservation and drought contingency plan rules or have a plan in effect currently adopted by the LCRA (Lower Colorado River Authority) or TCEQ (Texas Commission on Environmental Quality).

ANNUAL EVALUATION AND REVISIONS

This Ordinance will be revised at least every five (5) years to provide updates and changes as appropriately required.

Revisions were made in August 2000, March 2006, May 2009, May 2012, May 2014, July 2018, and May 2019 including system profile and goal updates, July 2022 including modification of Stage 3 and 4 DCP. Next revision will be made May 2024.

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DROUGHT CONTINGENCY PLAN

INTRODUCTION

It is necessary for the City of Llano to have in place a plan that will deal with emergency water demand situations. There are several scenarios where the public water supply could be adversely affected and the public's health jeopardized. Normal service can be interrupted by such uncontrollable circumstances as drought, hurricanes, tornadoes, vandalism, floods, contamination, or equipment failure. This Ordinance also has been developed to be initiated when the demands on the water system are significantly higher than normal conditions due to persistent drought periods, leading to higher-than-normal stress on the City's water system and supply. This Ordinance is in compliance with the Texas Commission on Environmental Quality regulations and LCRA's Drought Management Plan rules as adopted April 2005.

This Ordinance will provide the necessary indicators and control measures to temporarily abate water demand in emergency situations. These provisions are designed to be in place only as long as an emergency situation exists. To be effective the plan must have the following elements:

- Trigger conditions that will signal the existence of an emergency situation;
- Emergency control measures;
- Methods to relay information and notify the public;
- Enforcement procedures;
- Method of implementation of plan; and
- Procedure for plan termination notification.

SYSTEM DESCRIPTION

The City's water treatment facilities design capacity is rated at 2,083 gallons per minute (gpm) or 3.0 million gallons per day (MGD). The water treatment facility's current automated operation capacity is 1,200 gallons per minute (gpm) or 1.728 million gallons per day (MGD). Total water storage capacity of the City is 2.2 million gallons, of which 0.400 million gallons are considered elevated storage. In 2018, average daily water demand for the City was 0.623 MGD. The peak daily water demand for 2018 was 1.168 MGD. The distribution capacity is 3,400 gpm and provides potable water to eight pressure zones within the City. In high pressure areas of the distribution system greater than 110 psi, pressure reducer valves have been installed. Pressure reducers can be installed on homes where service pressure is greater than 80 psi by a licensed plumber.

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TRIGGER CONDITIONS

Section I: Declaration of Policy, Purpose and Intent

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the City of Llano hereby adopts the following regulations and restrictions on the delivery and consumption of water.

Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be **non-essential** and continuation of such uses **during times of water shortage or other emergency water supply conditions** are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section X of this Ordinance.

Section II: Public Involvement

Opportunity for the public to provide input into the preparation of the Ordinance was provided by the City of Llano by means of a public hearing.

Section III: Public Education

The City of Llano will **annually** provide the public with information about the Ordinance, including information about the conditions under which each state of the Ordinance is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of **press releases in local newspaper, public events, and utility bill inserts.**

Section IV: Coordination with Regional Water Planning Group

The service area of the City of Llano is located within the boundaries of the Lower Colorado River Authority, and the City of Llano has provided a copy of this Ordinance to the LCRA.

Section V: Authorization

The Mayor or City Manager is hereby authorized and directed to implement the applicable provisions of this Ordinance upon determination that such implementation is necessary to protect public health, safety and welfare. The Mayor or City Manager SHALL have the authority to initiate or terminate drought stages or other water supply emergency response measures as described in this Ordinance.

Section VI: Application

The provisions of this Ordinance SHALL apply to all persons, customers, and property utilizing potable water provided by the City of Llano. The terms "person" and "customer" as used in the Ordinance include individuals, corporations, partnerships, associations, and all other legal entities. The term "water" as used in this Ordinance refers to potable water provided by the City of Llano.

Section VII: Definitions

For the purposes of this Ordinance, the following definitions SHALL apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Average Daily Flow: calculated average of gauge reading from LCRA Hydromet from reading nearest to 12:00 AM, 4:00 AM, 8:00 AM, 12:00 PM, 4:00 PM, and 8:00 PM.

Commercial and institutional water use: water use that is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

Conservation: those practices, techniques, and technologies that reduce the consumption of water supplied by the City of Llano, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

Contamination: the presence of any foreign substance (organic, inorganic, radiological, or biological) in water, which tends to degrade its quality and can constitute a hazard or impair the usefulness of the water.

Customer: any person, company, or organization using water supplied by City of Llano.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry or institution.

Even number address: street addresses or rural postal route numbers ending in 0, 2, 4, 6 or 8 and locations without addresses.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscape areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and right-of-ways and medians.

Non-essential water use: water uses that are neither essential nor required for the protection of public, health, safety, and welfare, including:

1. Irrigation of landscape areas including parks, athletic fields and golf courses, except otherwise provided under this Ordinance;
2. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
3. Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
4. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
5. Flushing gutters or permitting water to run or accumulate in any gutter or street;
6. Use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
7. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
8. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
9. Use of water from hydrants for construction purposes or any other purposes other than firefighting.

Odd numbered address: street addresses or rural postal route numbers ending in 1, 3, 5, 7 or 9

Potable: water that complies with Texas Commission of Environmental Quality (TCEQ) rules for drinking water and other domestic uses.

Section VIII: Criteria for Initiation, Response and Termination of Drought Response States

The flow of the Llano River is greatly dependent on base flow from springs. During periods of low base flow, the Llano River is capable of great fluctuations, even on a daily basis. Setting and implementing drought trigger levels with such fluctuation can be difficult and confusing to all parties involved.

The trigger levels established in this Ordinance are based on the condition that the Llano River is the only source of supply for the City of Llano. Should an additional backup source become established to supplement the Llano River, the DCP and trigger levels may need to be reviewed and revised.

The triggering criteria described below are based on the flow of water in the Llano River, water consumption rates, and water pressure within the system. The City of Llano's Water Conservation and Drought Contingency Plan is segmented into 4 stages. As part of the City of Llano's Water Conservation Plan, it is recommended that all customers voluntarily conserve water year-round by limiting non-essential water use to 2 times per week. It is suggested to maintain the watering schedule that is set forth in the Drought Contingency Plan. Stage 1 Moderate Water Shortage Conditions is a voluntary conservation plan to limit

watering to TWICE per WEEK and install the flashboards. Stage 2 System Capacity Limitations implements MANDATORY water conservations measures to TWICE per WEEK, when Stage 1 Goal cannot be met. Stages 3 and 4, Severe to Critical Water Shortage Conditions, are mandatory restrictions with triggers based on ZERO flow over City Dam and Robinson Park Lake drained, respectively; as well as, any one or combination of high consumption rates, low water pressure in the system, and/or any situation deemed an emergency by the Mayor or City Manager.

The City Manager, or his/her designee, SHALL monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Ordinance, SHALL determine that a moderate, severe, or critical emergency or water shortage condition exists and SHALL implement the following procedures:

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STAGE 1 TRIGGERS – MODERATE WATER SHORTAGE CONDITIONS

Requirements for initiation:

Customers SHALL be requested to voluntarily conserve water and adhere to the prescribed restrictions on non-essential water use, defined in Section VII – Definitions of this Ordinance.

The City of Llano SHALL install boards on City Dam annually, after March 1 when the average daily flows fall below 80 cfs. However, the Mayor or City Manager may implement Stage 1 of the Ordinance at any time if conditions prior to March 1st warrant concerns for the City of Llano water supply. The City SHALL increase public awareness of Recommended Water Conservation Efforts.

Requirements for termination:

After September 30th, the Mayor or City Manager SHALL rescind Stage 1 of the Ordinance and SHALL have the boards removed when the average daily flows exceed 80 cfs.

STAGE 1 RESPONSE – MODERATE WATER SHORTAGE CONDITIONS

Goal: Limit the daily pumpage at the water treatment plant to 1.3 million gallons per day.

VOLUNTARY Water Use Restrictions:

Water customers are suggested to voluntarily limit the irrigation of landscaped areas with automatic irrigation systems and hose-end sprinklers to TWICE per WEEK on the designated water day during the hours of 12 Midnight to 10 AM and 7 PM to 12 Midnight.

Designated Watering Days

Odd Numbered Addresses	Wednesday and/or Saturday
Even Numbered Addresses	Thursday and/or Sunday
Commercial, Multi-family	Tuesday and/or Friday

Irrigation of landscaped areas is permitted at any time if it is by means of a hand-held hose, a faucet filled bucket or water can of five (5) gallons or less, or drip irrigation system.

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STAGE 2 TRIGGERS – SYSTEM CAPACITY LIMITATIONS

Due to limitations of the water treatment facility's current automated operation capacity, the goal for Stage 1 and Stage 2 has been set at 1.3 million gallons per day. The 10-year max daily demand is 1.5 million gallons per day. 1.3 MGD is used for the goal of these two stages to allow for contingency demands needed for normal plant operation, hydrant flushing, and possible water main breaks without exceeding plant operation capacities.

Requirements for initiation:

Customers SHALL be REQUIRED to conserve water and comply with the requirements and restrictions on certain non-essential water uses of Stage 2 of this Ordinance when:

1. Stage 1 Goals cannot be met for 3 consecutive days
2. System demand exceed 1.3 MGD for 3 consecutive days between October 1 and February 28.

Requirements for termination:

1. After September 30th, the Mayor or City Manager SHALL rescind Stage 2 of the Ordinance and SHALL have the boards removed when the average daily flows exceed 80 cfs.
2. The Mayor or City Manager SHALL rescind Stage 2 of the Ordinance when System Demands fall below 1.0 MGD for 3 consecutive days between October 1 and February 28.

STAGE 2 RESPONSE – SYSTEM CAPACITY LIMITATIONS

Goal: Limit the daily pumpage at the water treatment plant to 1.3 million gallons per day.

MANDATORY Water Use Restrictions:

Water customers are required to limit the irrigation of landscaped areas with automatic irrigation systems and hose-end sprinklers to TWICE per WEEK on the designated water day during the hours of 12 Midnight to 10 AM and 7 PM to 12 Midnight.

Designated Watering Days

Odd Numbered Addresses	Wednesday and/or Saturday
Even Numbered Addresses	Thursday and/or Sunday
Commercial, Multi-family	Tuesday and/or Friday

Irrigation of landscaped areas is permitted at any time if it is by means of a hand-held hose, a faucet filled bucket or water can of five (5) gallons or less, or drip irrigation system.

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STAGE 3 TRIGGERS – SEVERE WATER SHORTAGE CONDITIONS

Requirements for initiation:

Customers SHALL be REQUIRED to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Ordinance when:

1. When water NATURALLY quits flowing over the City Dam/boards
2. When the Goal for Stage 2 cannot be met under Stage 2 Restrictions for 3 consecutive days.

Requirements for termination:

The Mayor or City Manager SHALL rescind Stage 3 of the Ordinance when the average daily discharge of the Llano River at Llano exceeds 30 cfs for 10 consecutive days. Upon termination of Stage 3, Stage 1 becomes operative.

STAGE 3 RESPONSE – SEVERE WATER SHORTAGE CONDITIONS

Goal: Limit the daily pumpage at the water treatment plant not to exceed 0.8 million gallons per day calculated on a 7-day rolling average.

Water Use Restrictions:

1. Irrigation of landscaped areas SHALL be limited to ONCE per week starting on the designated watering day between the twelve-hour period of 8:00 PM to 8:00 AM the following morning and SHALL be by means of a hose-end sprinkler, permanently installed automatic sprinkler systems, hand-held hose, a faucet-filled bucket, or drip irrigation system only.

Hose-end Sprinklers, Sprinkler Systems,
Hand-held Hose (with automatic shutoff nozzle), and/or Drip Irrigation

Addresses Ending In	Designated Day
0 or 9	Monday
Commercial, Multi-family even address	Tuesday
1 or 8	Wednesday
2 or 7, Golf Course	Thursday
Commercial, Multi-Family odd address	Friday
3 or 6	Saturday
4 or 5	Sunday

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2. The watering of golf course fairways and tee is allowed ONCE per week on starting on Thursday at 8:00 PM thru Friday 8:00 AM the following day. Greens are the most important investment in the golf course. Special rules apply to preserve the greens. The watering of greens on an as need bases is limited to between the hours of 8:00 PM to 8:00 AM by sprinkler system and hand-held hose between the hours of Noon and 6:00 PM. In high heat situations as determined by Director of Parks or City Manager, watering each green, by sprinkler system, up to a maximum of 10 minutes between the hours of Noon to 6:00 PM will be allowed.

3. The sale of bulk water and the rental of fire hydrant meters is to be discontinued.

4. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle NOT occurring on the premises of a commercial car wash and commercial service stations and NOT in the immediate interest of public health, safety, and welfare is prohibited. Further such vehicle washing at commercial car washes and commercial service stations SHALL occur ONLY between the hours of 8:00 PM and 8:00 AM.

5. Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 8:00 PM and 8:00 AM.

6. The operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system. Refilling of fountains or ponds equipped with a recirculation system is prohibited except on designated watering days between the hour of 8:00 PM and 8:00 AM.

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STAGE 4 TRIGGERS – CRITICAL WATER SHORTAGE

The effects of low flow on the biological and chemical processes of the Llano River have an impact on the water needs of the citizens of Llano. While water restrictions are certainly a burden to citizens, they are necessary to limit additional strain on the Llano River and the associated treatment facilities. As the flow of the Llano River decreases to very low levels, the temperature of the water increases and the amount of dissolved oxygen in the water decreases. Lower levels of dissolved oxygen result in increased costs associated with treatment of higher levels of nitrates and resulting changes in water taste. These higher temperatures and reduced dissolved oxygen can also have a significant negative impact on the aquatic habitat of the River.

At the point which water can no longer be pumped from Robinson Park Lake and City Lake is full, there is an estimated 459 ac-ft of storage with the flashboards installed. With water elevation at the top of the boards to depth of the water intake, the capacity correlates to approximately 153 days of water remaining in City Lake. These figures are based off the 2012 Halff Report. It is recommended that the City obtain the resources to perform a bathometric survey to determine the quantity of water available. This is due to the ever-changing conditions of the river.

Requirements for initiation:

Customers SHALL be required to comply with the requirements and restrictions on non-essential water uses for Stage 4 of this Ordinance when:

1. Water can NO longer be pumped from Robinson Park Lake into City Lake.
2. Poor raw water quality requiring less pumpage to maintain treatability; or
3. Water system fails from acts of God or man; or
4. Any mechanical failure of pumping equipment which will require more than twelve (12) hours to repair which causes unprecedented loss of capability to provide water service.
5. The Goal for Stage 3 cannot be met under Stage 3 Restriction.

Requirements for termination:

The Mayor or City Manager SHALL rescind Stage 4 of this Ordinance when both lakes are at full capacity. Upon termination of Stage 4, Stage 3 becomes operative.

STAGE 4 RESPONSE-CRITICAL WATER SHORTAGE

Goal: Limit the daily pumpage at the water treatment plant to 0.4 million gallons per day.

Meeting: The Mayor SHALL schedule weekly EMERGENCY meetings with the City Council to make any modifications to this plan. An item for "Discussion and Possible Action of submitted Variances" SHALL be placed on all City Council Meeting Agendas for the weekly EMERGENCY meetings with the City Council as required in this stage (see Section XI for variances).

Senior Water Right: Priority Call for Water Rights may be initiated.

The Mayor, at his/her discretion, may contact TCEQ and make a request for Priority Call claiming Water Rights.

- TCEQ Field Operations Program Support-512-239-0400
- TCEQ Region 11(Austin) Office-512-339-2929

Water use restrictions:

1. All NON-ESSENTIAL water use, as defined in Section VII, SHALL be PROHIBITED.
2. Residents SHALL NOT be allowed to use water provided by the City of Llano to water trees, gardens, shrub, potted plants and/or foundations by any means.
3. The use of water provided by the City of Llano to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is ABSOLUTELY PROHIBITED.
4. The use of water provided by the City of Llano for filling or refilling of any pools and/or hot tubs is ABSOLUTELY PROHIBITED including the City of Llano City Pool and City Splash pad.
5. The use of water provided by the City of Llano for watering the JLK Arena is PROHIBITED.
6. The use of water for irrigations of the golf course from the Llano River SHALL be PROHIBITED.
7. Due to potential biological growth due to low flow conditions, swimming in the Llano River at Robison Lake and Town Lake in Badu Park is strongly advised against. The city should make best efforts to notify the citizens of the potential hazards.

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STAGE 4 EXCESSIVE USAGE

Single-Family Residential Customers

Water rates for all residential customers served by the City shall, for gallons consumed in excess of 6,000 gallons, be charged at 5 (five) times the regular rate for the first billing after Stage 4 is implemented and ten (10) times the regular rate for the second billing after Stage 4 is implemented. If Stage 4 of the Water Conservation and Drought Contingency Plan has been in effect for the majority of days during any billing cycle (the 1st of each month through the 31st of the same month), Stage 4 rates will be charged for the entire billing cycle.

Master-Metered Multi-Family Residential Customers

Water rates for all residential water customers residing in a master-metered multi-family residence served by the City shall, for gallons consumed in excess of 6,000 gallons, be charged at 5 (five) times the regular rate for the first billing after Stage 4 is implemented and ten (10) times the regular rate for the second billing after Stage 4 is implemented. If Stage 4 of the Water Conservation and Drought Contingency Plan has been in effect for the majority of days during any billing cycle (the 1st of each month through the 31st of the same month), Stage 4 rates will be charged for the entire billing cycle.

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NOTIFICATION

The Mayor or City Manager SHALL notify the public regarding initiation or termination of drought response stages, and include what the next most severe stage entails, by means of:

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
City's Paper of Record	✓	✓	✓	✓
Billing Statement	✓	✓	✓	✓
Highway Signage	✓	✓	✓	✓
Social Media	✓	✓	✓	✓
Direct Mail			✓	✓
Public Service Announcement			✓	✓

Additional Notification:

The Mayor or City Manager SHALL notify directly, or cause to be notified directly, the following individuals and entities:

1. Mayor / Chairman and members of the City Council / Utility Board
2. TCEQ (required when mandatory restrictions are imposed)
3. Fire Chief
4. City and/or County Emergency Management Coordinator(s)
5. County Judge and Commissioner(s)
6. Major water users
7. Critical water users, e.g. hospitals
8. Parks / Street Superintendents & Public Facilities Managers

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Section IX: Contamination

In the event of system failure or contamination, the City Manager will manage the City of Llano's limited water supply, in coordination with Local and/or State Emergency Management personnel, by requiring such measures as are necessary to maintain public health and safety, including elimination of service to part or all of the water system.

Section X: Enforcement

1. No person shall knowingly or intentionally allow the use of water from the City of Llano for residential, commercial, industrial, agricultural, governmental or any other purpose in a manner contrary to any provision of this Ordinance, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the City Manager, or his/her designee, in accordance with provisions of this Ordinance.

2. Any person who violates this Ordinance is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than fifty dollars ($50.00) and not more than five hundred dollars ($500.00). Each day that one or more of the provisions in this Ordinance is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Ordinance, the Chief of Police or his/her designee shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at $50.00, and any other costs incurred by the City of Llano in discontinuing service. In addition, suitable assurance must be given to the Mayor that the same action shall not be repeated while the Ordinance is in effect. Compliance with this Ordinance may also be sought through injunctive relief in the District Court.

3. Any person, including a person classified as a water customer of the City of Llano, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Ordinance and that the parent could not have reasonably known of the violation.

4. A peace officer employed by the City of Llano may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the Municipal Court on the date shown on the citation for which the date shall not be less than three (3) business days nor more than five (5) business days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator. The alleged violator shall appear in Municipal Court to enter a plea of guilty or not guilty for the violation of this Ordinance. If the alleged violator fails to appear in Municipal Court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in Municipal Court before all other cases.

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Section XI: Variances

The Mayor, or City Manager, may in writing, grant a ONE time per stage, temporary emergency variance, that SHALL remain in effect until reviewed and voted on by the city council at their next emergency meeting. This temporary emergency variance would be for existing water uses otherwise prohibited under this Ordinance if it is determined that failure to grant such variance would cause an undue hardship or an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

1. Compliance with this Ordinance cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Ordinance is in effect.
2. Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Ordinance SHALL file a petition for variance with the City Secretary of the City of Llano, Mayor or City Manager after implementation of the Ordinance or a particular drought response stage has been invoked. All petitions for variances SHALL be reviewed by the Mayor and/or City Manager, and voted upon by the City Council; and SHALL include the following:

1. Name and address of the petitioner(s);
2. Purpose of water use;
3. Specific provision(s) of the Ordinance from which the petitioner is requesting relief;
4. Detailed statement as to how the specific provision of the Ordinance adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance;
5. Description of the relief requested;
6. Period of time for which the variance is sought;
7. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Ordinance and the compliance date; and
8. Other pertinent information.

Variances granted by the City of Llano SHALL be subject to the following conditions:

1. Variances granted SHALL include a timetable for compliance; and/or expiration
2. Variances granted SHALL expire when the Stage is no longer in effect, or as the petitioner has failed to meet specified requirements.

Due to the unpredictable, constantly evolving nature of drought conditions and water supply, variances may be limited in scope and duration as deemed appropriate by the granting body. Upon request, a variance extension may be granted based on current

conditions if deemed appropriate by the granting body. A denied or expired variance may be reapplied for at any time and SHALL be evaluated based on current conditions.

No variance SHALL be retroactive or otherwise justify any violation of this Ordinance occurring prior to the issuance of the variance.

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ANNUAL EVALUATION AND REVISIONS

The trigger conditions SHALL be re-evaluated at least once a year for overall effectiveness and trigger conditions will be revised if necessary. This Ordinance will be revised at least every five years to provide updates and changes as appropriately required.

Revisions were made in August 2000, March 2006, May, 2009, May 2012, May 2014, July 2018, May 2019, and July 2022 including system profile updates, goal updates, and rate updates to coincide with the master fee schedule. The next revision will be due by May 2024.

Kelli Tudyk, Mayor

ATTEST:

Brenda Poe, TRMC, City Secretary

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