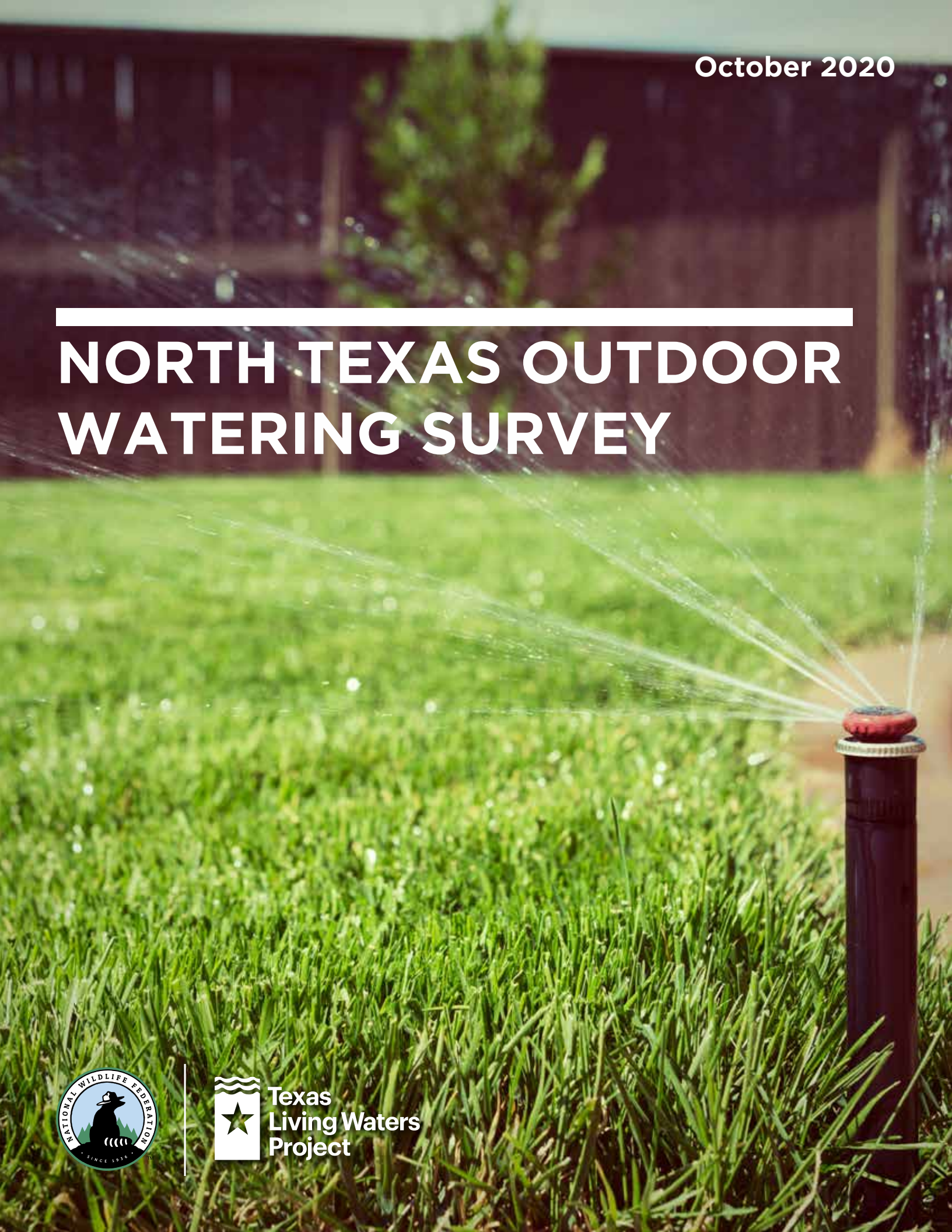
October 2020

NORTH TEXAS OUTDOOR WATERING SURVEY



National Wildlife Federation

Texas Living Waters Project

ACKNOWLEDGMENTS

The *North Texas Outdoor Watering Survey* was researched and written by Meghan Bock and Ian Johnston of AIQUEOUS in collaboration with Jennifer Walker and Jonathan Seefeldt of National Wildlife Federation.

The National Wildlife Federation is a partner in the Texas Living Waters Project, a collaboration of conservation organizations working to ensure fresh water will be available to support both the people of Texas and the wildlife and habitats that constitute the state's natural heritage. Our project partners are the Lone Star Chapter of the Sierra Club, Galveston Bay Foundation, and Hill Country Alliance. Learn more about the Texas Living Waters Project at **texaslivingwaters.org**.

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BACKGROUND

Landscape irrigation is estimated to be the single-largest component of municipal water use in Texas. Municipal water demand, in turn, is the second-largest category of water use in the state, second only to agriculture. Texas communities aiming to use water supplies efficiently, therefore, need to take a hard look at the lawn. For this reason and as part of a greater effort to enable a resilient water future for Texas, the Texas Living Waters Project has performed an analysis of how each water provider in North Texas is approaching outdoor water use. We ask if communities are limiting the number of days per week that customers can water their lawns or simply limiting the number of hours per day automatic irrigation systems can be operated? We then examine both how much water can be saved through outdoor irrigation management and how much water we need to save to meet the region's future water needs.

INTRODUCTION

For much of Texas, reducing the demand for outdoor irrigation represents an immediate opportunity and a long-term necessity. For North Texas in particular, rapid population growth, coupled with burgeoning housing markets and a higher penetration of in-ground irrigation systems will drive significantly higher outdoor water use in the coming years and decades (Region C Water Planning Group, 2020). Indeed, according to the Region C Region Water Plan, North Texas has over 25% of the state's population and anticipates a staggering 16% growth by the year 2030. At the same time, rising temperatures and decreasing rainfall for much of Texas and the Southwest will raise the risk and likelihood of future severe droughts. In order to proactively manage water supplies in the face of these challenges, North Texas utilities will need to enlist a comprehensive set of landscaping and irrigation practices designed to help their customers reduce outdoor water uses.

For the purposes of this report and analysis, we define North Texas as the counties included in the Region C Region Water Planning Group.

To support better practices, instituting outdoor watering limitations is a straight-forward, minimal-cost strategy. By curbing the hours per day and the number of days per week people can irrigate their lawns with automatic irrigation systems, communities across North Texas will reduce peak demand, build resiliency against drought, and realize long-term water savings at a fraction of the price required for capital-intensive infrastructure projects.

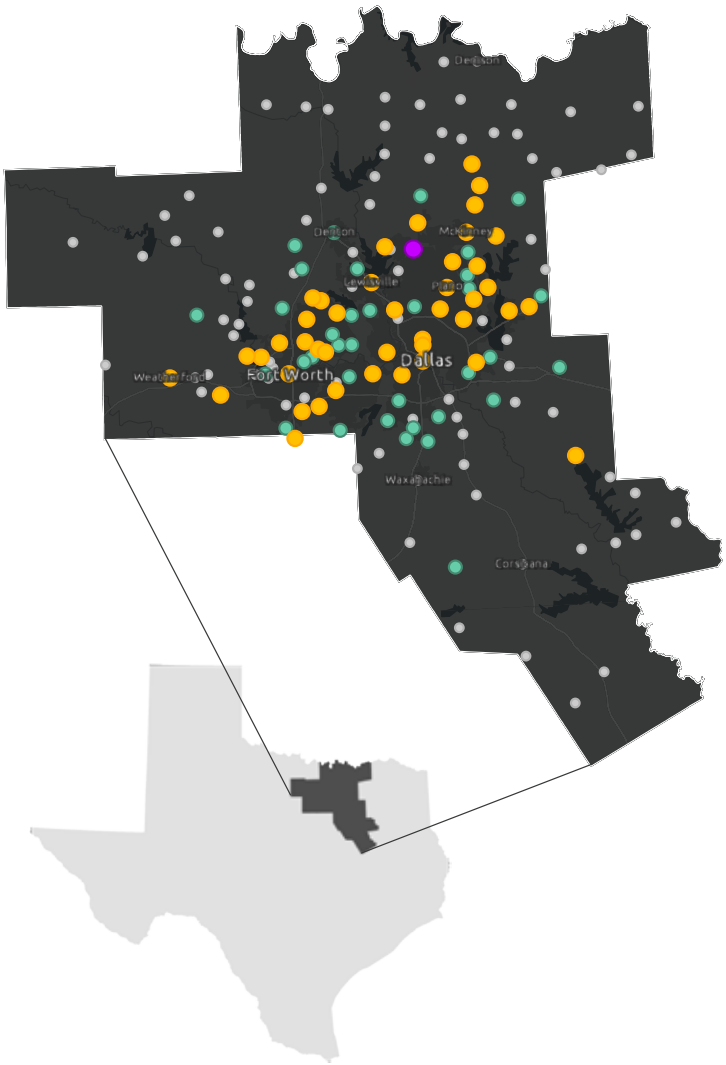
To assist in these efforts, the *North Texas Outdoor Watering Survey* performs an analysis of 272 water user groups across North Texas — looking specifically at the implementation of outdoor watering restrictions, the projected savings associated with this strategy, and opportunities for North Texas utilities to leverage these savings as they prepare for the future.

OUTDOOR WATERING LIMITS IN TEXAS

Like the rest of the Lone Star state, North Texas is no stranger to drought. Less than a decade ago Texas was at the peak of one of the worst short-term droughts ever recorded in the state. The extreme conditions experienced in 2011 forced cities across Texas to implement emergency responses to preserve dwindling water supplies, one of the most important and common of which was outdoor watering restrictions.

Yet what happened when the 2011 drought dissipated a few years later? Were outdoor watering limitations lifted once the risk passed or did communities realize the potential long-term benefits of permanent limitations and incorporate this into their plans for anticipated population growth and potential future droughts?

MAP 1: UTILITIES IN NORTH TEXAS WITH OUTDOOR WATERING LIMITATIONS BY TYPE & SIZE



Once-per-week outdoor watering

Large Utilities (Serve population of 100,000 or more)

- Frisco

Twice-per-week outdoor watering

Large Utilities (Serve population of 100,000 or more)

- Allen
- Carrollton
- Dallas
- Forth Worth
- Garland
- Grand Prairie
- Irving
- Lewisville
- McKinney
- Mesquite
- Plano
- Richardson

Medium Utilities (Serve population of 25,000 - 100,000)

- Hurst
- Keller
- Little Elm
- North Richland Hills
- Rockwall
- Sachse
- Southlake
- University Park
- Weatherford
- Wylie

Small Utilities (Serve population of 25,000 or less)

- Aledo
- Anna
- Burleson
- Cockrell Hill
- Dalworthington Gardens
- Everman
- Fate
- Highland Park
- Kemp
- Kennedale
- Lakeside
- Lake Worth
- Lucas
- Melissa
- Princeton
- Prosper
- Roanoke
- Saginaw
- Trophy Club MUD 1
- Van Alstyne
- Watauga
- Westlake

Time of day limitations only

Large Utilities (Serve population of 100,000 or more)

- Arlington
- Denton

Medium Utilities (Serve population of 25,000 - 100,000)

- Balch Springs
- Bedford
- Cedar Hill
- Coppell
- Duncanville
- Euless
- Grapevine
- Haltom City
- Lancaster
- Mansfield

Small Utilities (Serve population of 25,000 or less)

- Addison
- Bloom Grove
- Blue Ridge
- Celina
- Colleyville
- Crowley
- Fairview
- Glenn Heights
- Haslet
- Highland Village
- Murphy
- Northlake
- Ovilla
- Parker
- Ponder
- Red Oak
- Richland Hills
- Royse City
- Seagoville
- Sunnyvale
- Springtown
- Terrell
- Walnut Creek SUD
- Westworth Village

Prior to the 2011 drought, limits on outdoor watering were predominantly a temporary measure used by utilities for drought management. In the years since, permanent programs limiting outdoor watering have become more widely recognized and adopted as a long-term conservation strategy by communities in the Dallas-Fort Worth metroplex—not simply to prepare for drought, but as a tool to better manage increasing water demand from population growth.

The city of Frisco, for example, now leads the charge with a no more than once-per-week outdoor watering schedule enforced April through October. Meanwhile, 44 other cities have adopted no more than twice-per-week irrigation schedules (includes time-of-day restrictions). To put this into perspective, nearly 65 percent of the entire North Texas population now adheres to a once- or twice-per-week outdoor watering schedule. In fact, all large utilities in North Texas (those servicing populations of 100,000 people or more) have some form of limitations — at the very least, time of day limits — in place.

Nearly 65 percent of the entire North Texas population now adheres to a once- or twice-per-week outdoor watering schedule.

Despite the progress made over the past decade however, North Texas still has work to do. Currently, 70% or 191 utilities in Region C have no form of limitation on outdoor watering in place at all. Furthermore, 13% or 36 utilities have only time of day limitations in place. The fact is, those 191 utilities with no limitations and the 36 utilities with just time of day serve over 2.5 million people, or 35% of the total population of North Texas Region C. This evidently represents a great opportunity for water conservation.

TABLE 1: TYPES OF LIMITATIONS BY NUMBER OF UTILITIES & SHARE OF POPULATION

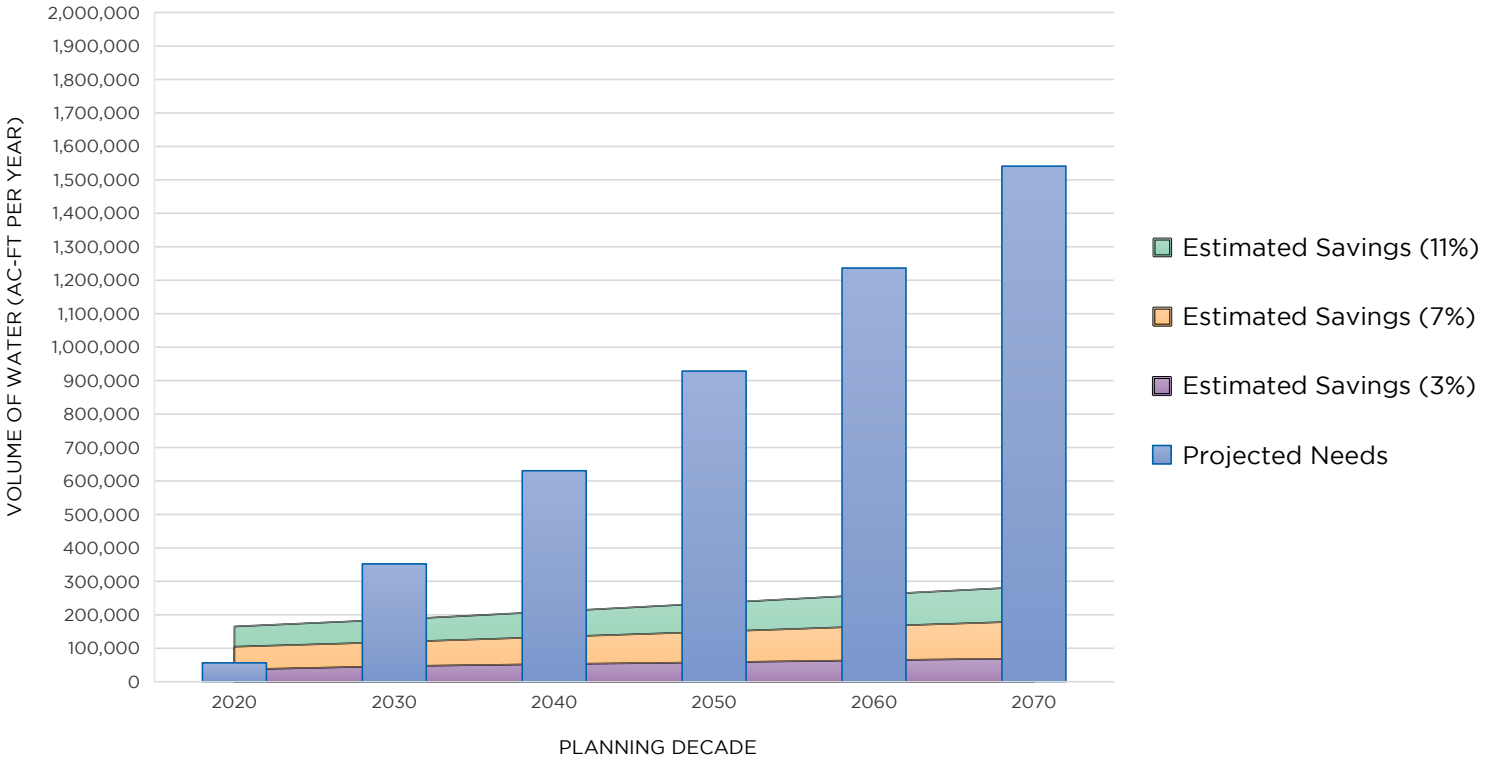
Type of Limitation	Total Number of Utilities	Percent of Utilities	Total Population	Share of Total Population
None	191	70%	106,726	18%
Time of Day only	36	13%	1,286,060	17%
2x per week	44	16%	4,625,987	62%
1x per week	1	< 1%	188,483	3%
Total	272	100%	7,467,734	100%

Source: Information on outdoor watering limitations was obtained from utility websites and municipal code of ordinances.

As the table above demonstrates, only one city utility — Frisco — has a year-round no more than once-per-week watering program in place. The 44 cities recognized for having implemented a no more than twice-per-week watering have this schedule in place during periods of peak demand, typically April through October. However, when outside water demand drops during November through March, the majority of these cities transition to a no more than once-per-week watering schedule.

For many of the remaining North Texas communities, implementing outdoor watering limits where they do not already exist will be a critical step to save water in the region. Another way to leverage additional savings will be to strengthen existing limits. For example, those 36 utilities with only time of day restrictions would be well advised to transition to a no more than twice per week schedule. Additionally, many utilities only have seasonal limitations in place and could realize greater savings through year-round implementation.

CHART 1: ESTIMATED MUNICIPAL SAVINGS COMPARED TO PROJECTED NEEDS



Another means by which Region C could more effectively achieve overall savings would be to focus specifically on large- and medium-size utilities (those serving over 100,000 or more and those serving between 25,000 - 100,000, respectively) who can adopt or build upon watering limitations. As it stands, there are currently 11 medium-size utilities with no limitations in place serving a total population of nearly 490 thousand people, and two large utilities with just time-of-day limitations — Denton and Arlington — who serve nearly 532 thousand customers. Implementing or strengthening limits on outdoor watering in just one of these medium or large cities would have an immediate and dramatic impact. For example, the City of Flower Mound, a utility serving over 75,000 customers with no outdoor watering policy in place, could have saved 11% (or 2,095 GPCD) of its projected municipal demand in 2020 by just adopting twice-per-week watering limitations.

Water planners in Region C do recognize the value of making efficiency a priority. The Region C Water Planning Group (RWPG), for example, has identified twice-weekly irrigation as a recommended municipal conservation water management strategy in its 2020 Regional Water Plan. In fact, between the 2020 and 2070 planning horizons the Region C plan estimates savings from outdoor watering limitations will represent a considerable piece (38 percent) of all savings from municipal conservation water management strategies for the entire region (Region C Water Planning Group, 2020). With fewer and fewer water savings coming from indoor conservation measures, the RWPG has made it clear that implementing limits on outdoor watering will play an integral role in municipal conservation programs and in meeting the region's future water needs.

The five largest wholesale water providers in Region C also recognize the importance of outdoor watering limits. North Texas Municipal Water District, Tarrant Regional Water District, Upper Trinity Regional Water District, Dallas Water Utility, and the City of Fort Worth all recommended the adoption of time-of-day and no more than twice-per-week watering limitations to their customer cities in their most recent Water Conservation Plans submitted to the Texas Water Development Board in 2019. These recommendations should serve as further motivations to pursue adoption of an outdoor irrigation ordinance. Retail water utilities are able to use these recommendations to garner broader support from key stakeholders and the public. In other instances, utilities are contractually required to implement the recommendations set forth by their water provider.

It is increasingly evident that placing limits on outdoor watering are becoming the norm in North Texas. So how much water savings can North Texas communities expect to achieve through the implementation of outdoor watering limits?

SAVINGS FROM OUTDOOR WATERING LIMITATIONS

Ultimately the volume of savings will depend on the unique characteristics of each utility such as service-base composition, customer behavior, the extent to which the schedule is enforced, the amount of resources dedicated to public awareness, and the presence of complementary programs. Despite this variance, according to the Region C Water Plan, a twice-weekly irrigation schedule has the potential to reduce municipal demand by at least three percent. Separate studies have also demonstrated that effective public outreach along with robust enforcement mechanisms can further enhance the effectiveness of outdoor watering limitations.

While the Region C plan estimates that communities can expect to see 3% savings from implementing no more than twice per week watering the 2018 report, *Water Conservation by the Yard: A Statewide Analysis of Outdoor Water Savings Potential* estimated that North Texas cities could see anywhere from 7 to 11 percent reduction in total municipal water demand (Texas Living Waters Project, 2018). The savings range presented in Water Conservation by the Yard is based on household outdoor water demand and the level of effort expended in the implementation of the limitations. For example, a community with a customer base characterized by high outdoor demand that implements a rigorous education and enforcement program to support adoption of a watering schedule will see significantly more water savings compared to a community with less rigorous education and enforcement mechanisms. The table below highlights the range of estimated savings based on Region C's 3 percent savings potential compared to *Water Conservation by the Yard's* 7 to 11 percent savings.

TABLE 2: ESTIMATED MUNICIPAL SAVINGS BASED ON 2021 DRAFT REGION C WATER PLAN

Planning Decade	Municipal Demand (ac-ft per year)	Estimated Municipal Savings (ac-ft per year)			Projected Needs (ac-ft per year)	Estimated Savings as a Percentage of Needs
		3 percent (Region C)	7 percent (WCBTY)	11 percent (WCBTY)		
2020	1,498,059	36,306	104,864	164,786	56,355	64% - >100%
2030	1,691,127	46,188	118,379	186,024	351,982	13% - 53%
2040	1,912,520	52,562	133,876	210,377	630,492	8% - 33%
2050	2,137,840	58,370	149,649	235,162	928,346	6% - 25%
2060	2,366,973	64,427	165,688	260,367	1,236,335	5% - 21%
2070	2,585,738	69,572	181,002	284,431	1,540,817	5% - 18%

Although the savings from outdoor watering limitations can vary, the bottom line is that North Texas will see reductions in overall municipal demand, especially during the summer months when outdoor watering is at its highest. Additional supporting data is needed to better understand all of the factors at play here, therefore it is important for utilities to track these savings and share them with their peers so that more robust savings estimates can be developed in the future. **For more information on the savings potential by utility, refer to the Appendix for utility-level data tables.**

WHY FOCUS ON OUTDOOR WATERING?

Adopting outdoor watering limitations is a low-cost, effective, water-conservation strategy that will allow North Texas to: save money, manage its anticipated growth in population and total water demand, and build resilience against drought.

According to the most recent Texas State Water plan, over the next 50 years it is estimated that over $60 billion of investment will be required to build the necessary infrastructure to meet future water demand. In almost all instances, water conservation is the most cost-effective tool to meet water needs — and the implementation of outdoor watering schedules especially so. As a straight-forward and minimal-cost strategy, ongoing outdoor watering limitations — supported by enforcement and education — drive reductions in per-capita water use and therefore help avoid the necessity to pay for additional infrastructure to meet future demand.

One of the primary reasons outdoor watering limitations are so effective is that landscape irrigation is estimated to be the single, largest component of municipal water use, and municipal water use is the second largest use of water in Texas (Cabrera et al., 2013). While single-family households typically dedicate a greater share of their total water usage to outdoor purposes, other municipal sectors, such as multi-family residential and institutional, commercial, and industrial (ICI), also have high outdoor watering demands. As such, not only are limitations a simple and cost-effective conservation tool across a variety of sectors of municipal use, they also address one of the most significant sources of water demand in the state.

Given the proportion of municipal water use that is used on outdoor watering (especially in summer months) and that outdoor watering is primarily discretionary (i.e. not used for essential purposes) outdoor watering limitations are a logical and effective tool used by municipalities and water utilities to respond to drought, so much so that they are often the first line of defense for communities. While they do provide immediate relief to stretch existing water supplies and bring savings in times of crises, watering limitations have historically been implemented only as droughts occur and are rarely continued after the threat dissipates. This is a missed opportunity. Ongoing outdoor watering limitations can drive long-term reductions in municipal per capita water usage — not just providing consistent overall savings, but building greater water resiliency for communities facing increasingly frequent and severe drought.

The advantages of adopting ongoing limitations are evident and their implementation straightforward and cost effective. Some may argue that there are negative implications to consider — primarily that landscapes require more water than ongoing limitations would allow. However, multiple studies show there are significant segments of the population that in fact over-water, some by a very large margin (DeOreo, 2011). When this is considered along with the fact that 80-90% of outdoor water use is applied to lawns, plants, and food gardens, it is not only apparent that the advantages of implementing outdoor watering limitations outweigh the perceived disadvantages, but that these perceived downsides are in fact inaccurate (Hermitte and Mace, 2012).

One of the primary reasons outdoor watering limitations are so effective is that landscape irrigation is estimated to be the single, largest component of municipal water use, and municipal water use is the second largest use of water in Texas.

WHAT'S NEXT?

In order to implement effective programs to save water, limits on outdoor watering should be carefully designed — it is important to demonstrate the value of these programs, the opportunities for water savings, and what the community gains. To do so successfully, utilities must earn the support of key decision makers and the general public through education and awareness. Below are several resources to guide a community through the planning and development of a program to limit outdoor water use.

HELPFUL RESOURCES

Water Conservation by the Yard: A Statewide Analysis of Outdoor Water Savings Potential
A comprehensive analysis of outdoor watering in Texas and effective strategies for locking in the full savings potential of outdoor watering schedules

TWDB Outdoor Watering Schedule Municipal BMP
A complete guide on how to implement an outdoor watering schedule

Alliance for Water Efficiency
A variety of tools to support a comprehensive outdoor watering program

Your peers!
Check out the Appendix for a list of your peers that have already implemented no more than twice-per-week outdoor watering schedules

CONCLUSION

Total water use in North Texas Region C is increasing as a result of population growth. With all signs indicating that this growth will continue — and with it the likelihood for greater costs associated with future infrastructure investments to meet those demands — the need for implementing effective water conservation strategies becomes all the more apparent.

Outdoor watering limits are among the most effective tools to reduce water demand on a large scale. Most Texans are familiar with limits on outdoor watering as a decade-old component of drought response. Watering limits are not only familiar by now, they are increasingly common as year-round strategies in place to ensure long-term water demand reduction and a resilient water future for Texas. As limits on outdoor watering become even more widely accepted, it will be important to consider how they can be more effective and where there may be the most potential for water savings. While North Texas has made great strides since the 2011 drought, there is even more progress yet to be realized. The future water supply of North Texas depends on it.

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APPENDIX

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
ABLES SPRINGS WSC	4,502	-	21	33	2	>100%	-	32	50	128	25% - 39%	-	58	91	507	11% - 18%	-	-	-
ADDISON	14,869	166	430	675	247	67% - >100%	206	480	754	1,183	17% - 64%	242	565	888	2,435	10% - 36%	-	-	X
ALEDO	5,579	-	60	95	0	>100%	-	105	166	256	41% - 65%	-	142	223	661	21% - 34%	-	X	X
ALLEN	105,000	657	1,532	2,408	119	>100%	714	1,666	2,619	5,229	14% - 50%	747	1,743	2,739	10,371	7% - 26%	-	X	X
ALVORD	1,625	-	16	25	0	>100%	-	23	35	94	24% - 38%	-	35	55	276	13% - 20%	-	-	-
ANNA	15,037	65	167	263	9	>100%	0	450	707	3,607	12% - 20%	0	984	1,546	11,231	9% - 14%	-	X	X
ANNETTA	3,720	-	30	47	0	>100%	-	40	62	0	>100%	-	55	87	0	>100%	-	-	-
ARGYLE WSC	13,466	0	186	292	0	>100%	144	303	475	1,480	10% - 32%	143	302	475	2,141	7% - 22%	-	-	-
ARLEDGE RIDGE WSC	1,332	-	11	17	0	>100%	-	14	22	15	94% - >100%	-	37	58	336	11% - 17%	-	-	-
ARLINGTON	387,000	0	4,677	7,349	0	>100%	2,055	4,796	7,536	18,334	11% - 41%	2,078	4,849	7,620	32,210	6% - 24%	-	-	X
ATHENS	14,241	0	203	320	0	>100%	105	238	374	0	>100%	299	664	1,043	3,963	8% - 26%	-	-	-
AUBREY	4,597	-	38	60	0	>100%	-	58	91	264	22% - 34%	-	99	155	853	12% - 18%	-	-	-
AVALON WATER SUPPLY & SEWER SERVICE	1,182	-	10	16	0	>100%	-	15	23	62	24% - 37%	-	38	59	389	10% - 15%	-	-	-
AZLE	12,339	-	135	213	252	54% - 84%	-	151	237	471	32% - 50%	-	247	388	1,847	13% - 21%	-	-	-
B AND B WSC	1,752	-	17	27	0	>100%	-	18	28	1	>100%	-	31	48	125	25% - 39%	-	-	-
B B S WSC	29	-	0	0	0	-	-	0	0	0	>100%	-	0	0	0	>100%	-	-	-
B H P WSC	812	-	4	7	2	>100%	-	7	11	125	6% - 9%	-	10	16	505	2% - 3%	-	-	-
BALCH SPRINGS	26,418	-	192	302	110	>100%	-	215	337	530	40% - 64%	-	267	419	1,152	23% - 36%	-	-	X
BEAR CREEK SUD	5,849	21	48	76	3	>100%	44	103	162	322	14% - 50%	110	256	402	1,519	7% - 26%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)														Current Outdoor Watering Limitations		
		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
BECKER JIBA WSC	3,547	-	23	36	2	>100%	-	34	53	106	32% - 50%	-	87	137	516	17% - 26%	-	-	-
BEDFORD	48,435	0	644	1,012	0	>100%	306	713	1,121	2,129	14% - 53%	323	754	1,184	4,122	8% - 29%	-	-	X
BELLS	1,713	-	13	20	0	>100%	-	16	26	0	>100%	-	55	86	501	11% - 17%	-	-	-
BENBROOK WATER AUTHORITY	22,323	145	361	568	1,585	9% - 36%	191	426	669	2,502	8% - 27%	238	528	830	3,965	6% - 21%	-	-	-
BETHEL ASH WSC	2,115	-	15	24	0	>100%	-	18	28	0	>100%	-	23	36	0	>100%	-	-	-
BETHESDA WSC	10,614	60	156	245	3	>100%	80	187	295	1,133	7% - 26%	102	239	375	3,357	3% - 11%	-	-	-
BLACK ROCK WSC	1,570	0	21	33	0	>100%	0	30	48	0	>100%	20	47	73	200	10% - 37%	-	-	-
BLACKLAND WSC	4,237	23	60	94	5	>100%	30	71	111	223	13% - 50%	37	87	137	522	7% - 26%	-	-	-
BLOOMING GROVE	973	0	11	18	0	>100%	0	13	21	1	>100%	7	17	27	69	10% - 39%	-	-	X
BLUE RIDGE	2,425	11	29	45	13	85% - >100%	198	448	704	6,003	3% - 12%	903	2,040	3,206	28,742	3% - 11%	-	-	X
BOIS D ARC MUD	2,319	-	19	30	2	>100%	-	25	39	81	30% - 48%	-	64	100	641	10% - 16%	-	-	-
BOLIVAR WSC	11,956	-	75	117	0	>100%	-	99	156	153	65% - >100%	-	158	249	998	16% - 25%	-	-	-
BONHAM	12,603	-	142	223	0	>100%	-	238	373	210	>100%	-	482	757	3,699	13% - 20%	-	-	-
BOYD	1,304	0	15	24	14	>100%	9	22	35	69	13% - 50%	0	42	65	340	12% - 19%	-	-	-
BRANDON IRENE WSC	263	-	2	4	0	>100%	-	3	5	0	>100%	-	4	7	0	>100%	-	-	-
BRIDGEPORT	7,337	0	89	140	0	>100%	54	126	197	398	14% - 50%	122	286	449	2,383	5% - 19%	-	-	-
BUENA VISTA-BETHEL SUD	4,619	0	790	1,241	0	>100%	49	126	198	161	30% - >100%	132	308	483	1,836	7% - 26%	-	-	-
BURLESON	8,434	38	89	140	3	>100%	43	100	157	2,037	2% - 8%	80	188	295	5,204	2% - 6%	-	X	X
BUTLER WSC	1,450	-	16	25	0	>100%	-	15	24	0	>100%	-	15	24	0	>100%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
CADDO BASIN SUD	2,315	-	18	28	7	>100%	-	29	46	406	7% - 11%	-	61	96	1,866	3% - 5%	-	-	-
CALLISBURG WSC	1,656	-	11	17	0	>100%	-	10	16	0	>100%	-	10	16	0	>100%	-	-	-
CARROLLTON	130,481	655	1,698	2,668	950	69% - >100%	714	1,665	2,617	4,072	18% - 64%	706	1,646	2,587	7,061	10% - 37%	-	X	X
CASH SUD	1,220	4	10	15	337	1% - 5%	7	15	24	1,009	1% - 2%	11	25	40	1,346	1% - 3%	-	-	-
CEDAR HILL	53,938	292	756	1,188	427	68% - >100%	456	1,065	1,673	2,589	18% - 65%	494	1,152	1,810	4,904	10% - 37%	-	-	X
CELINA	22,000	123	320	503	0	>100%	587	1,371	2,154	10,614	6% - 20%	1,233	2,877	4,520	32,127	4% - 14%	-	-	X
CHATFIELD WSC	3,933	-	30	47	0	>100%	-	35	55	2	>100%	-	45	70	182	25% - 39%	-	-	-
CHICO	1,412	0	19	31	0	>100%	9	21	33	23	39% - >100%	26	61	96	570	5% - 17%	-	-	-
COCKRELL HILL	4,787	-	29	46	17	>100%	-	29	46	72	40% - 63%	-	80	125	343	23% - 37%	-	X	X
COLLEGE MOUND WSC	11,510	-	54	85	4	>100%	-	81	127	264	31% - 48%	-	189	297	1,395	14% - 21%	-	-	-
COLLEYVILLE	23,719	0	645	1,013	0	>100%	309	722	1,134	2,254	14% - 50%	319	745	1,171	4,252	8% - 28%	-	-	X
COLLINSVILLE	2,567	-	20	31	0	>100%	-	28	43	153	18% - 28%	-	46	72	411	11% - 17%	-	-	-
COMBINE WSC	3,714	-	25	39	25	99% - >100%	-	33	52	137	24% - 38%	-	55	86	336	16% - 26%	-	-	-
COMMUNITY WSC	3,419	-	24	37	0	>100%	-	27	42	84	32% - 50%	-	34	54	196	18% - 28%	-	-	-
COPEVILLE SUD	3,959	-	23	36	1	>100%	-	33	51	102	32% - 50%	-	134	211	798	17% - 26%	-	-	-
COPPELL	41,982	300	779	1,224	447	67% - >100%	334	780	1,226	1,919	17% - 64%	332	775	1,218	3,335	10% - 37%	-	-	X
CORBET WSC	2,785	-	18	28	0	>100%	-	20	31	1	>100%	-	25	40	103	25% - 39%	-	-	-
CORINTH	24,928	0	299	470	0	>100%	161	347	545	2,123	8% - 26%	160	345	543	3,051	5% - 18%	-	-	-
CORSICANA	26,739	0	427	671	0	>100%	0	497	781	58	>100%	278	648	1,018	5,346	5% - 19%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)														Current Outdoor Watering Limitations		
		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
CRANDALL	4,209	21	53	84	158	13% - 53%	33	77	121	499	7% - 24%	41	97	152	776	5% - 20%	-	-	-
CRESCENT HEIGHTS WSC	1,885	-	11	18	0	>100%	-	12	19	0	>100%	-	21	33	0	>100%	-	-	-
CROSS TIMBERS WSC	7,500	0	115	181	0	>100%	62	145	228	680	9% - 34%	65	152	238	1,099	6% - 22%	-	-	-
CROWLEY	16,250	72	169	265	6	>100%	97	227	357	851	11% - 42%	169	395	621	3,271	5% - 19%	-	-	X
CULLEOKA WSC	5,500	-	42	66	4	>100%	-	63	99	197	32% - 50%	-	108	170	643	17% - 26%	-	-	-
DALLAS	1,242,136	8,259	19,271	30,283	20,466	40% - >100%	9,807	22,884	35,960	107,474	9% - 33%	12,084	28,197	44,309	281,878	4% - 16%	-	X	X
DALWORTHINGTON GARDENS	2,298	0	64	100	1	>100%	28	65	102	204	14% - 50%	29	69	108	391	7% - 28%	-	X	X
DAWSON	893	-	10	16	0	>100%	-	11	17	1	>100%	-	12	19	49	25% - 39%	-	-	-
DECATUR	8,509	63	162	255	514	12% - 50%	122	284	447	2,250	5% - 20%	215	501	787	5,336	4% - 15%	-	-	-
DELTA COUNTY MUD	45	-	0	0	0	>100%	-	0	0	0	>100%	-	0	0	0	>100%	-	-	-
DENISON	27,340	199	506	795	882	23% - 90%	242	551	866	1,809	13% - 48%	413	931	1,463	8,468	5% - 17%	-	-	-
DENTON	145,000	707	1,832	2,879	0	>100%	1,227	2,862	4,497	14,293	9% - 31%	2,974	6,940	10,906	72,551	4% - 15%	-	-	X
DENTON COUNTY FWSD 10	7,884	0	104	163	0	>100%	121	258	406	1,579	8% - 26%	121	258	405	2,279	5% - 18%	-	-	-
DENTON COUNTY FWSD 1-A	14,000	110	256	402	49	>100%	233	544	855	2,818	8% - 30%	233	544	855	4,185	6% - 20%	-	-	-
DENTON COUNTY FWSD 7	13,500	0	239	376	0	>100%	112	238	374	1,457	8% - 26%	112	238	374	2,101	5% - 18%	-	-	-
DESERT WSC	1,700	-	15	24	0	>100%	-	18	28	0	>100%	-	36	57	122	29% - 46%	-	-	-
DESOTO	54,505	254	660	1,036	379	67% - >100%	321	749	1,177	1,843	17% - 64%	386	900	1,414	3,873	10% - 37%	-	-	-
DOGWOOD ESTATES WATER	1,205	-	13	20	0	>100%	-	14	22	7	>100%	-	24	38	151	16% - 25%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)														Current Outdoor Watering Limitations		
		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
DORCHESTER	1,622	-	9	14	0	>100%	-	9	15	0	>100%	-	11	18	0	>100%	-	-	-
DUNCANVILLE	43,110	-	426	670	245	>100%	-	443	695	1,095	40% - 64%	-	436	685	1,878	23% - 36%	-	-	X
EAST CEDAR CREEK FWSD	20,100	-	95	149	196	48% - 76%	-	117	184	514	23% - 36%	-	160	252	1,133	14% - 22%	-	-	-
EAST FORK SUD	15,700	57	134	210	10	>100%	67	156	245	488	14% - 50%	85	198	311	1,172	7% - 26%	-	-	-
EAST GARRETT WSC	1,490	0	17	27	0	>100%	11	26	41	21	52% - >100%	42	99	155	1,001	4% - 16%	-	-	-
EDGECLIFF	2,924	0	35	55	0	>100%	14	34	53	105	13% - 50%	14	33	52	189	7% - 28%	-	-	-
ELMO WSC	2,566	-	15	24	1	>100%	-	22	35	70	32% - 50%	-	55	86	325	17% - 26%	-	-	-
ENNIS	21,354	0	282	443	0	>100%	157	366	576	341	46% - >100%	593	1,383	2,174	16,395	4% - 13%	-	-	-
EULESS	54,725	0	634	997	0	>100%	273	638	1,003	1,451	19% - 69%	0	630	990	2,603	24% - 38%	-	-	X
EUSTACE	1,170	-	9	14	0	>100%	-	10	15	0	>100%	-	22	35	156	14% - 22%	-	-	-
EVERMAN	6,153	16	37	58	0	>100%	15	36	56	0	>100%	15	35	55	0	>100%	-	X	X
FAIRFIELD	4,593	0	67	105	0	>100%	0	69	109	0	>100%	84	195	306	1,686	5% - 18%	-	-	-
FAIRVIEW	12,592	121	315	495	24	>100%	206	481	756	1,504	14% - 50%	217	506	794	2,999	7% - 26%	-	-	X
FARMERS BRANCH	30,582	248	632	993	363	68% - >100%	304	693	1,089	1,706	18% - 64%	359	812	1,277	3,497	10% - 37%	-	-	-
FARMERSVILLE	8,660	-	73	114	5	>100%	-	397	623	1,240	32% - 50%	-	1,242	1,952	7,367	17% - 26%	-	-	-
FATE	15,994	76	197	310	15	>100%	146	341	536	1,066	14% - 50%	260	606	953	3,597	7% - 26%	-	X	X
FERRIS	2,950	-	32	51	0	>100%	-	75	118	176	43% - 67%	-	105	165	965	11% - 17%	-	-	-
FILES VALLEY WSC	755	-	8	13	0	>100%	-	12	19	0	>100%	-	23	37	0	>100%	-	-	-
FLO COMMUNITY WSC	454	-	4	6	0	>100%	-	4	7	0	>100%	-	5	7	0	>100%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
FLOWER MOUND	75,555	514	1,333	2,095	791	65% - >100%	641	1,495	2,349	7,898	8% - 30%	688	1,605	2,521	12,446	6% - 20%	-	-	-
FOREST HILL	12,975	-	95	149	2	>100%	-	101	159	316	32% - 50%	-	197	309	1,246	16% - 25%	-	-	-
FORNEY	21,341	-	216	340	150	>100%	-	316	496	2,656	12% - 19%	-	778	1,223	12,024	6% - 10%	-	-	-
FORNEY LAKE WSC	7,775	36	88	139	7	>100%	60	130	204	406	15% - 50%	175	379	596	2,248	8% - 26%	-	-	-
FORT WORTH	960,824	5,673	13,238	20,802	6,640	85% - >100%	8,588	20,039	31,490	125,332	7% - 25%	11,145	26,005	40,865	250,890	4% - 16%	-	X	X
FRISCO	188,343	1,372	3,201	5,030	424	>100%	1,859	4,338	6,816	13,813	13% - 49%	2,699	6,297	9,895	37,475	7% - 26%	X	-	X
FROGNOT WSC	1,630	-	12	19	0	>100%	-	16	26	0	>100%	-	26	40	0	>100%	-	-	-
GAINESVILLE	18,477	-	186	292	0	>100%	-	198	312	0	>100%	-	348	547	5,621	6% - 10%	-	-	-
GARLAND	254,701	1,233	2,877	4,522	238	>100%	1,360	3,174	4,988	10,617	13% - 47%	1,369	3,195	5,021	20,255	7% - 25%	-	X	X
GASTONIA SCURRY SUD	10,568	-	50	78	4	>100%	-	74	116	232	32% - 50%	-	247	389	1,467	17% - 26%	-	-	-
GLENN HEIGHTS	17,696	-	136	213	73	>100%	-	221	348	526	42% - 66%	-	443	696	1,872	24% - 37%	-	-	X
GRAND PRAIRIE	218,127	1,056	2,463	3,870	1,680	63% - >100%	1,325	3,091	4,857	12,075	11% - 40%	1,315	3,069	4,822	17,754	7% - 27%	-	X	X
GRAPEVINE	52,243	552	1,288	2,025	1,063	52% - >100%	560	1,307	2,053	3,779	15% - 54%	557	1,300	2,043	5,453	10% - 37%	-	-	X
GUNTER	1,841	8	21	33	124	6% - 26%	0	37	58	354	10% - 16%	0	66	103	763	9% - 13%	-	-	-
HACKBERRY	1,870	13	32	50	3	>100%	24	51	80	159	15% - 51%	44	93	147	553	8% - 26%	-	-	-
HALTOM CITY	43,611	157	367	576	0	>100%	158	368	579	1,149	14% - 50%	197	461	724	2,628	7% - 28%	-	-	X
HASLET	1,750	0	40	63	0	>100%	84	176	276	581	14% - 48%	150	311	489	1,711	9% - 29%	-	-	X
HEATH	12,109	116	276	434	21	>100%	230	489	769	1,531	15% - 50%	254	540	849	3,205	8% - 26%	-	-	-
HICKORY CREEK SUD	401	-	3	4	17	16% - 26%	-	4	6	40	9% - 15%	-	7	11	90	8% - 12%	-	-	-

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		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
HIGH POINT WSC	4,879	-	31	49	2	>100%	-	43	68	134	32% - 50%	-	103	161	610	17% - 26%	-	-	-
HIGHLAND PARK	9,023	122	284	446	0	>100%	123	287	452	0	>100%	123	286	450	0	>100%	-	X	X
HIGHLAND VILLAGE	17,119	0	268	422	0	>100%	118	275	432	937	13% - 46%	117	273	429	1,322	9% - 32%	-	-	X
HILCO UNITED SERVICES	149	-	1	2	0	>100%	-	2	2	0	>100%	-	2	3	0	>100%	-	-	-
HONEY GROVE	1,817	-	20	32	0	>100%	-	19	30	0	>100%	-	19	30	0	>100%	-	-	-
HORSESHOE BEND WATER SYSTEM	1,655	-	11	17	0	>100%	-	15	23	0	>100%	-	32	50	0	>100%	-	-	-
HOWE	2,868	-	19	30	0	>100%	-	24	37	19	>100%	-	32	51	88	37% - 58%	-	-	-
HUDSON OAKS	4,000	37	96	151	325	11% - 47%	58	135	211	728	8% - 29%	58	134	211	910	6% - 23%	-	-	-
HURST	39,229	201	469	737	0	>100%	197	459	721	1,349	15% - 53%	194	452	711	2,429	8% - 29%	-	X	X
HUTCHINS	9,901	61	153	240	88	69% - >100%	121	272	428	669	18% - 64%	200	454	713	1,952	10% - 37%	-	-	-
IRVING	259,186	1,717	3,906	6,138	1,245	>100%	1,954	4,411	6,932	21,278	9% - 33%	1,939	4,377	6,878	22,115	9% - 31%	-	X	X
ITALY	2,365	-	22	34	0	>100%	-	32	51	255	13% - 20%	-	70	110	788	9% - 14%	-	-	-
JACKSBORO	4,873	-	48	75	337	14% - 22%	-	50	79	355	14% - 22%	-	52	82	374	14% - 22%	-	-	-
JOHNSON COUNTY SUD	2,649	-	24	38	0	>100%	-	28	44	0	>100%	-	36	56	1,716	2% - 3%	-	-	-
JOSEPHINE	1,434	8	21	34	2	>100%	20	47	74	172	12% - 43%	27	64	100	446	6% - 22%	-	-	-
JUSTIN	4,766	-	50	78	244	20% - 32%	-	124	195	741	17% - 26%	-	124	195	963	13% - 20%	-	-	-
KAUFMAN	7,754	35	90	141	10	>100%	0	129	203	566	23% - 36%	0	322	506	3,241	10% - 16%	-	-	-
KAUFMAN COUNTY DEVELOPMENT DISTRICT 1	3,687	24	62	97	5	>100%	41	95	150	298	14% - 50%	101	235	370	1,396	7% - 26%	-	-	-

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		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
KAUFMAN COUNTY MUD 11	3,702	16	43	67	4	>100%	26	62	97	194	13% - 50%	48	113	178	671	7% - 26%	-	-	-
KELLER	48,279	370	864	1,357	0	>100%	392	915	1,438	2,856	14% - 50%	390	911	1,431	5,195	8% - 28%	-	X	X
KEMP	1,699	8	21	33	189	4% - 18%	13	30	48	321	4% - 15%	35	82	129	1,058	3% - 12%	-	X	X
KENNEDALE	8,044	0	99	156	0	>100%	56	130	204	445	13% - 46%	82	190	299	964	9% - 31%	-	X	X
KENTUCKYTOWN WSC	2,856	-	25	39	0	>100%	-	33	52	104	32% - 50%	-	60	94	487	12% - 19%	-	-	-
KERENS	1,824	-	15	24	0	>100%	-	17	27	1	>100%	-	22	35	89	25% - 39%	-	-	-
KRUM	5,110	31	79	125	202	15% - 62%	51	119	187	611	8% - 31%	88	206	324	1,647	5% - 20%	-	-	-
LADONIA	1,600	-	17	27	0	>100%	-	23	37	84	28% - 43%	-	32	50	203	16% - 24%	-	-	-
LAKE CITIES MUNICIPAL UTILITY AUTHORITY	15,312	-	151	237	0	>100%	-	193	303	1,181	16% - 26%	-	207	325	1,827	11% - 18%	-	-	-
LAKE KIOWA SUD	2,200	-	62	98	0	>100%	-	66	103	0	>100%	-	68	107	0	>100%	-	-	-
LAKE WORTH	5,157	0	79	124	0	>100%	41	95	149	259	16% - 58%	75	174	273	925	8% - 30%	-	X	X
LAKESIDE	1,350	10	26	41	79	13% - 52%	12	27	43	97	12% - 44%	12	28	44	107	11% - 41%	-	X	X
LANCASTER	45,097	207	537	844	308	67% - >100%	342	798	1,255	2,079	16% - 60%	456	1,063	1,670	5,472	8% - 31%	-	-	X
LEONARD	2,200	-	23	36	0	>100%	-	25	39	25	99% - >100%	-	27	43	62	44% - 69%	-	-	-
LEWISVILLE	107,326	564	1,410	2,216	858	66% - >100%	794	1,773	2,786	6,372	12% - 44%	1,007	2,238	3,517	13,010	8% - 27%	-	X	X
LINDSAY	1,325	-	12	19	0	>100%	-	13	21	15	88% - >100%	-	26	40	195	13% - 21%	-	-	-
LITTLE ELM	29,627	122	285	448	28	>100%	137	319	501	1,048	13% - 48%	136	317	498	1,880	7% - 26%	-	X	X
LUCAS	7,822	68	162	255	12	>100%	112	241	378	753	15% - 50%	146	312	490	1,849	8% - 26%	-	X	X

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)														Current Outdoor Watering Limitations		
		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
LUELLA SUD	3,680	-	27	43	0	>100%	-	33	52	85	39% - 61%	-	47	73	277	17% - 26%	-	-	-
M E N WSC	3,451	-	34	54	0	>100%	-	39	62	2	>100%	-	51	81	209	25% - 39%	-	-	-
MABANK	9,763	55	135	213	755	7% - 28%	72	159	249	1,099	7% - 23%	187	411	645	4,784	4% - 13%	-	-	-
MACBEE SUD	267	-	1	2	0	>100%	-	2	3	0	>100%	-	3	5	0	>100%	-	-	-
MALAKOFF	2,432	-	19	30	0	>100%	-	19	30	6	>100%	-	22	34	26	83% - >100%	-	-	-
MANSFIELD	67,611	500	1,297	2,038	2,346	21% - 87%	833	1,944	3,055	18,078	5% - 17%	1,332	3,107	4,883	41,156	3% - 12%	-	-	X
MARILEE SUD	7,686	-	79	125	0	>100%	-	83	130	0	>100%	-	82	129	119	69% - >100%	-	-	-
MARKOUT WSC	2,391	11	29	46	107	10% - 43%	19	45	70	317	6% - 22%	47	110	173	1,242	4% - 14%	-	-	-
MCKINNEY	186,565	1,226	2,860	4,494	224	>100%	1,470	3,429	5,388	10,906	13% - 49%	2,304	5,376	8,449	32,229	7% - 26%	-	X	X
MELISSA	17,938	118	276	434	361	33% - >100%	521	1,216	1,910	13,900	4% - 14%	772	1,802	2,832	22,390	3% - 13%	-	X	X
MESQUITE	149,936	670	1,563	2,457	127	>100%	790	1,844	2,898	6,039	13% - 48%	988	2,305	3,623	14,487	7% - 25%	-	X	X
MIDLOTHIAN	20,660	136	337	529	1,399	10% - 38%	233	519	815	8,924	3% - 9%	291	646	1,015	10,346	3% - 10%	-	-	-
MILLIGAN WSC	3,728	-	32	50	3	>100%	-	43	68	134	32% - 50%	-	67	106	400	17% - 26%	-	-	-
MINERAL WELLS	2,107	9	24	38	250	4% - 15%	0	22	35	248	9% - 14%	0	20	32	248	8% - 13%	-	-	-
MOUNT ZION WSC	2,521	14	35	55	3	>100%	22	52	81	162	14% - 50%	37	87	137	515	7% - 27%	-	-	-
MOUNTAIN PEAK SUD	9,467	80	208	327	705	11% - 46%	118	276	433	2,140	6% - 20%	219	512	804	7,505	3% - 11%	-	-	-
MOUNTAIN SPRINGS WSC	2,709	0	32	50	0	>100%	0	35	55	0	>100%	39	91	142	774	5% - 18%	-	-	-
MUENSTER	1,564	-	19	29	0	>100%	-	18	29	0	>100%	-	19	29	0	>100%	-	-	-
MURPHY	19,330	120	311	489	24	>100%	132	308	484	964	14% - 50%	132	307	483	1,822	7% - 26%	-	-	X
MUSTANG SUD	30,600	-	321	505	0	>100%	-	857	1,347	6,956	12% - 19%	-	1,666	2,618	17,209	10% - 15%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)														Current Outdoor Watering Limitations		
		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
NAVARRO MILLS WSC	3,128	-	23	37	0	>100%	-	26	41	0	>100%	-	34	53	118	29% - 45%	-	-	-
NEVADA SUD	2,493	8	18	28	1	>100%	10	24	38	76	13% - 50%	143	333	523	1,973	7% - 26%	-	-	-
NEWARK	1,772	-	14	21	69	20% - 31%	-	24	38	219	11% - 17%	-	60	94	732	8% - 13%	-	-	-
NORTH COLLIN SUD	5,566	-	57	90	4	>100%	-	74	116	231	32% - 50%	-	118	185	699	17% - 27%	-	-	-
NORTH FARMERSVILLE WSC	417	2	6	10	0	>100%	4	9	14	28	14% - 50%	6	14	22	83	7% - 26%	-	-	-
NORTH HUNT SUD	525	-	2	4	0	>100%	-	3	5	0	>100%	-	4	6	0	>100%	-	-	-
NORTH KAUFMAN WSC	2,818	-	13	21	1	>100%	-	21	33	66	32% - 50%	-	52	82	310	17% - 26%	-	-	-
NORTH RICHLAND HILLS	72,102	384	897	1,409	0	>100%	398	928	1,458	3,475	11% - 42%	393	918	1,443	6,275	6% - 23%	-	X	X
NORTH RURAL WSC	770	-	5	8	0	>100%	-	5	9	0	>100%	-	6	9	0	>100%	-	-	-
NORTHLAKE	9,500	0	135	212	0	>100%	186	434	682	2,192	8% - 31%	330	769	1,208	5,949	6% - 20%	-	-	X
NORTHWEST GRAYSON COUNTY WCID 1	1,906	-	14	21	31	44% - 69%	-	14	22	36	39% - 61%	-	29	46	255	11% - 18%	-	-	-
OAK RIDGE SOUTH GALE WSC	2,551	-	15	24	14	>100%	-	16	25	35	45% - 70%	-	32	50	234	14% - 22%	-	-	-
OVILLA	4,485	30	75	118	43	70% - >100%	53	116	182	284	19% - 64%	152	329	516	1,414	11% - 37%	-	-	X
PALMER	2,440	-	19	30	0	>100%	-	28	45	67	43% - 67%	-	85	134	786	11% - 17%	-	-	-
PALOMA CREEK NORTH	8,194	0	119	187	0	>100%	75	161	253	986	8% - 26%	75	161	253	1,421	5% - 18%	-	-	-
PALOMA CREEK SOUTH	4,154	0	60	94	0	>100%	39	82	128	499	8% - 26%	39	82	128	720	5% - 18%	-	-	-
PANTEGO	2,653	-	48	75	0	>100%	-	46	73	0	>100%	-	46	72	0	>100%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
PARKER	7,316	95	219	344	320	30% - >100%	113	231	363	816	14% - 45%	166	339	533	2,176	8% - 24%	-	-	X
PARKER COUNTY SUD	6,762	-	50	79	0	>100%	-	105	164	629	17% - 26%	-	188	295	1,822	10% - 16%	-	-	-
PELICAN BAY	1,684	-	8	12	0	>100%	-	8	13	0	>100%	-	9	14	7	>100%	-	-	-
PILOT POINT	6,500	-	62	98	320	19% - 31%	-	101	159	878	12% - 18%	-	247	388	2,956	8% - 13%	-	-	-
PINK HILL WSC	1,992	-	16	25	0	>100%	-	17	26	8	>100%	-	34	53	258	13% - 21%	-	-	-
PLANO	286,600	2,214	5,167	8,119	406	>100%	2,229	5,202	8,174	16,834	13% - 49%	2,247	5,242	8,238	32,669	7% - 25%	-	X	X
PLEASANT GROVE WSC	1,354	-	9	15	0	>100%	-	10	15	0	>100%	-	29	46	34	86% - >100%	-	-	-
POETRY WSC	909	-	7	11	0	>100%	-	10	16	115	9% - 14%	-	25	39	510	5% - 8%	-	-	-
POINT ENTERPRISE WSC	817	-	6	10	0	>100%	-	6	10	0	>100%	-	7	11	0	>100%	-	-	-
PONDER	3,117	-	27	43	3	>100%	-	48	76	305	16% - 25%	-	95	149	967	10% - 15%	-	-	X
POST OAK SUD	706	-	4	6	0	>100%	-	4	6	4	95% - >100%	-	5	8	184	3% - 4%	-	-	-
POTTSBORO	3,056	14	36	57	95	15% - 60%	24	55	87	210	11% - 41%	88	204	321	2,135	4% - 15%	-	-	-
PRINCETON	11,047	-	83	130	10	>100%	-	557	875	1,938	29% - 45%	-	651	1,023	4,504	14% - 23%	-	X	X
PROSPER	20,160	155	362	569	39	>100%	267	624	980	3,304	8% - 30%	388	906	1,424	7,336	5% - 19%	-	X	X
PROVIDENCE VILLAGE WCID	7,235	-	66	103	0	>100%	-	65	102	398	16% - 26%	-	65	102	572	11% - 18%	-	-	-
R C H WSC	4,266	24	63	99	5	>100%	43	100	158	314	14% - 50%	82	192	301	1,136	7% - 27%	-	-	-
RED OAK	7,667	-	80	126	25	>100%	-	118	186	290	41% - 64%	-	321	504	1,380	23% - 37%	-	-	X
RED RIVER AUTHORITY OF TEXAS	1,457	-	25	39	0	>100%	-	29	46	0	>100%	-	33	51	0	>100%	-	-	-
RENO	2,537	-	12	19	0	>100%	-	12	20	7	>100%	-	13	21	39	34% - 54%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
RHOME	2,304	11	28	44	281	4% - 16%	21	50	78	752	3% - 10%	58	136	214	3,029	2% - 7%	-	-	-
RICE WATER SUPPLY AND SEWER SERVICE	9,521	-	80	125	0	>100%	-	113	178	9	>100%	-	195	306	813	24% - 38%	-	-	-
RICHARDSON	109,516	824	1,922	3,020	156	>100%	843	1,968	3,093	6,538	13% - 47%	898	2,095	3,292	13,147	7% - 25%	-	X	X
RICHLAND HILLS	8,401	-	80	126	0	>100%	-	86	135	216	40% - 63%	-	119	187	583	20% - 32%	-	-	X
RIVER OAKS	7,559	-	60	94	0	>100%	-	56	88	173	32% - 51%	-	54	86	311	18% - 28%	-	-	-
ROANOKE	7,949	0	158	248	0	>100%	107	234	368	806	13% - 46%	107	234	367	1,332	8% - 28%	-	X	X
ROCKETT SUD	40,447	-	323	508	0	>100%	-	445	699	1,492	30% - 47%	-	1,012	1,590	14,254	7% - 11%	-	-	-
ROCKWALL	52,740	297	693	1,089	89	>100%	632	1,476	2,319	7,371	9% - 31%	768	1,793	2,817	16,509	5% - 17%	-	X	X
ROSE HILL SUD	5,106	-	31	49	2	>100%	-	43	67	134	32% - 50%	-	110	173	651	17% - 27%	-	-	-
ROWLETT	67,523	310	723	1,136	56	>100%	348	813	1,277	2,541	14% - 50%	400	933	1,466	5,533	7% - 26%	-	-	-
ROYSE CITY	11,279	-	91	144	8	>100%	-	228	358	726	31% - 49%	-	758	1,191	4,557	17% - 26%	-	-	X
RUNAWAY BAY	1,447	15	37	58	686	2% - 8%	22	46	72	789	3% - 9%	35	75	118	3,391	1% - 3%	-	-	-
SACHSE	28,704	156	365	574	36	>100%	154	359	564	1,144	13% - 49%	155	362	569	2,148	7% - 26%	-	X	X
SAGINAW	23,166	95	222	349	0	>100%	117	273	429	853	14% - 50%	122	286	449	1,628	7% - 28%	-	X	X
SANGER	8,190	34	80	125	0	>100%	50	117	184	296	17% - 62%	86	201	317	1,259	7% - 25%	-	-	-
SANSOM PARK	4,799	-	37	59	0	>100%	-	41	65	3	>100%	-	48	75	42	>100%	-	-	-
SANTO SUD	94	-	1	1	0	>100%	-	1	1	0	>100%	-	1	2	15	7% - 11%	-	-	-
SARDIS LONE ELM WSC	19,699	143	371	583	1,401	10% - 42%	242	566	889	4,417	5% - 20%	257	601	944	5,572	5% - 17%	-	-	-
SEAGOVILLE	18,882	-	144	227	174	83% - >100%	-	195	306	1,011	19% - 30%	-	250	393	2,119	12% - 19%	-	-	X

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		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
SEIS LAGOS UD	2,041	16	40	63	4	>100%	17	40	63	125	14% - 50%	18	42	66	248	7% - 27%	-	-	-
SHERMAN	43,522	0	749	1,177	0	>100%	0	781	1,227	25,365	3% - 5%	727	1,696	2,665	43,378	2% - 6%	-	-	-
SOUTH ELLIS COUNTY WSC	1,622	0	29	46	0	>100%	0	42	66	0	>100%	46	107	168	922	5% - 18%	-	-	-
SOUTH FREESTONE COUNTY WSC	2,565	-	18	28	18	99% - >100%	-	18	29	26	71% - >100%	-	58	91	587	10% - 15%	-	-	-
SOUTH GRAYSON SUD	4,134	-	35	56	0	>100%	-	46	73	156	30% - 47%	-	60	95	354	17% - 27%	-	-	-
SOUTHLAKE	27,709	344	802	1,260	0	>100%	448	1,046	1,644	3,265	14% - 50%	647	1,509	2,371	8,607	8% - 28%	-	X	X
SOUTHMAYD	1,281	-	10	16	49	20% - 32%	-	11	18	70	16% - 26%	-	23	36	229	10% - 16%	-	-	-
SOUTHWEST FANNIN COUNTY SUD	5,835	-	40	64	0	>100%	-	52	82	115	45% - 71%	-	93	146	704	13% - 21%	-	-	-
SPRINGTOWN	4,068	24	63	99	468	5% - 21%	36	83	131	754	5% - 17%	35	83	130	748	5% - 17%	-	-	X
STARR WSC	2,355	-	17	27	0	>100%	-	17	27	0	>100%	-	35	55	0	>100%	-	-	-
SUNNYVALE	6,637	60	156	246	12	>100%	123	286	450	923	13% - 49%	141	329	518	1,954	7% - 26%	-	-	X
TALTY SUD	10,985	49	126	198	10	>100%	71	165	260	518	14% - 50%	191	445	699	2,637	7% - 26%	-	-	-
TEAGUE	4,029	18	48	75	64	28% - >100%	28	64	101	298	9% - 34%	51	119	187	1,080	5% - 17%	-	-	-
TERRELL	22,723	104	270	424	622	17% - 68%	294	685	1,076	5,394	5% - 20%	442	1,032	1,622	14,030	3% - 12%	-	-	X
THE COLONY	53,029	-	565	888	241	>100%	-	637	1,002	1,501	42% - 67%	-	689	1,083	2,915	24% - 37%	-	-	-
TIOGA	1,209	-	12	18	0	>100%	-	13	20	19	68% - >100%	-	41	65	424	10% - 15%	-	-	-
TOM BEAN	1,256	0	17	26	0	>100%	9	20	32	52	17% - 61%	18	41	65	353	5% - 18%	-	-	-
TRENTON	736	0	10	15	0	>100%	11	26	40	229	5% - 18%	53	125	196	1,644	3% - 12%	-	-	-
TRINIDAD	1,026	-	7	12	0	>100%	-	7	11	0	>100%	-	9	14	0	>100%	-	-	-

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		2020					2040					2070						
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
TROPHY CLUB MUD 1	12,750	146	340	535	0	>100%	144	337	529	930	15% - 57%	144	336	528	1,693	9% - 31%	-	X	X
TWO WAY SUD	6,256	-	49	76	5	>100%	-	70	111	319	22% - 35%	-	145	227	1,378	10% - 16%	-	-	-
UNIVERSITY PARK	25,656	228	533	837	0	>100%	223	519	816	0	>100%	221	515	810	0	>100%	-	X	X
VAN ALSTYNE	3,750	16	36	57	0	>100%	29	69	108	104	28% - >100%	91	213	335	1,248	7% - 27%	-	X	X
VENUS	81	0	1	2	92	1% - 2%	1	2	3	411	0% - 1%	1	3	5	654	0% - 1%	-	-	-
VERONA SUD	2,648	-	19	29	0	>100%	-	25	40	94	27% - 42%	-	39	62	297	13% - 21%	-	-	-
VIRGINIA HILL WSC	2,384	-	16	25	0	>100%	-	19	30	0	>100%	-	26	41	0	>100%	-	-	-
WALNUT CREEK SUD	21,351	-	112	176	627	18% - 28%	-	140	221	1,600	9% - 14%	-	374	587	7,435	5% - 8%	-	-	X
WATAUGA	24,525	85	199	313	0	>100%	80	186	292	580	14% - 50%	78	182	286	1,038	8% - 28%	-	X	X
WAXAHACHIE	37,700	0	481	756	0	>100%	256	646	1,015	1,622	16% - 63%	519	1,170	1,839	13,602	4% - 14%	-	-	-
WEATHERFORD	30,184	159	371	584	217	73% - >100%	198	461	724	2,009	10% - 36%	738	1,723	2,708	24,353	3% - 11%	-	X	X
WEST CEDAR CREEK MUD	18,066	-	85	134	0	>100%	-	93	147	291	32% - 50%	-	151	237	862	18% - 28%	-	-	-
WEST LEONARD WSC	1,556	-	14	23	0	>100%	-	15	24	0	>100%	-	27	43	0	>100%	-	-	-
WEST WISE SUD	3,899	-	33	53	26	>100%	-	34	53	141	24% - 38%	-	37	58	789	5% - 7%	-	-	-
WESTLAKE	1,541	0	125	196	0	>100%	239	559	878	2,031	12% - 43%	268	625	982	3,563	8% - 28%	-	X	X
WESTMINSTER WSC	1,909	-	18	28	0	>100%	-	25	39	0	>100%	-	39	61	6	>100%	-	-	-
WESTOVER HILLS	682	0	65	102	0	>100%	33	68	106	212	16% - 50%	35	72	114	412	8% - 28%	-	-	-
WESTWORTH VILLAGE	2,741	-	28	44	0	>100%	-	31	49	98	32% - 50%	-	38	59	215	18% - 28%	-	-	X
WHITE SETTLEMENT	16,957	-	146	229	0	>100%	-	150	236	335	45% - 70%	-	266	418	1,272	21% - 33%	-	-	-

Utility Name	Popula-tion	ESTIMATED MUNICIPAL SAVINGS / SAVINGS AS A PERCENTAGE OF PROJECTED NEEDS (BASED ON 2021 DRAFT REGION C WATER PLAN)															Current Outdoor Watering Limitations		
		2020					2040					2070							
		Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	Estimated Water Savings (ac-ft per year)			Needs (ac-ft per year)	Savings as a % of Needs	1x per week	2x per week	Time of Day
		3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY			3% Region C	7% WCBTY	11% WCBTY					
WHITE SHED WSC	2,769	-	21	33	0	>100%	-	27	42	85	32% - 50%	-	70	110	697	10% - 16%	-	-	-
WHITESBORO	3,839	-	33	52	0	>100%	-	32	50	0	>100%	-	51	81	188	27% - 43%	-	-	-
WHITEWRIGHT	1,906	-	18	29	0	>100%	-	18	28	0	>100%	-	20	31	0	>100%	-	-	-
WILLOW PARK	5,500	-	60	94	166	36% - 57%	-	106	166	819	13% - 20%	-	186	293	1,971	9% - 15%	-	-	-
WILMER	4,111	-	30	47	17	>100%	-	49	77	121	41% - 64%	-	258	405	1,109	23% - 37%	-	-	-
WOLFE CITY	90	-	1	1	0	>100%	-	1	1	0	>100%	-	2	3	15	14% - 21%	-	-	-
WOODBINE WSC	6,210	-	46	72	5	>100%	-	54	85	123	44% - 69%	-	70	110	348	20% - 32%	-	-	-
WORTHAM	1,185	-	12	19	12	99% - >100%	-	13	20	23	55% - 86%	-	24	38	188	13% - 20%	-	-	-
WYLIE	47,156	213	497	782	39	>100%	235	548	861	1,719	14% - 50%	285	664	1,044	3,951	7% - 26%	-	X	X
WYLIE NORTHEAST SUD	4,958	-	47	74	3	>100%	-	65	102	202	32% - 50%	-	231	362	1,368	17% - 26%	-	-	-