AMENDED WATER CONSERVATION PLAN

for

Reunion Ranch WCID

Adopted 4/15/25

Prepared for:

Reunion Ranch WCID
c/o Willatt & Flickinger, PLLC
12912 Hill Country Boulevard, Ste. F-232
Bee Cave, Texas 78738

Prepared by:

Murfee Engineering Company, Inc.
Texas Registered Firm No. F-353
1101 Capital of Texas Hwy., South, Building D
Austin, Texas 78746

APPLICANT INFORMATION

Applicant Name:	Reunion Ranch WCID
Address:	c/o Willatt & Flickinger, PLLC 12912 Hill Country Blvd, Suite F-232 Bee Cave, Texas 78738
Telephone Number:	(512) 476-6604
Fax Number:	(512) 469-9148
Application Prepared by:	Chris Rosales, PE
Title:	District Engineer

Signature: _____ Date: 4/15/25

1. Introduction

The Reunion Ranch WCID (the "District") water conservation plan has been developed to meet the LCRA Water Conservation Plan Rules for Water Sale Contracts in accordance with the LCRA Water Contract Rules. This Plan recognizes that conservation is a valuable tool in managing water utility systems.

Benefits of water conservation include:

- extending available water supplies
- reducing the risk of shortage during periods of extreme drought
- reducing water utility operating cost
- improving the reliability and quality of water utility service
- reducing customer cost for water service
- enhancing water quality and the environment.

This Plan applies to all of the District's retail water customers located with its water service area, as defined in its Water Supply Contract with LCRA.

Appendices
Appendix A - Historical Water Use Data
Appendix B - Landscape Conservation Standards
Appendix C - New Pool Construction Standards

2. Utility Profile Information

The proposed service area is approximately 525-acre (0.820 square mile) single-family residential subdivision located south of Ranch-to-Market 1826 in northeastern Hays County. The subdivision is proposed to have 535 connections.

As of June 2023, the reunion ranch water system had been built out to full capacity, with the exception of a handful of vacant lots. There are a total of 535 residential and HOA common building connections. The estimated residential population is 1,326 people and is comprised of single-family units.

Reunion Ranch WCID (the District) will procure all water service via raw water contract with the LCRA and wholesale water service agreement with the West Travis County Public Utility Agency (WTCPUA). The current contract is 350 acre-feet/year (afy) based on historical water use trends and projected conservation measures.

The water distribution system consists of typical pipes, valves, fire hydrants, and connections designed and specified in accordance with TCEQ rules as well as standard engineering practice. The system will be designed for a daily capacity of 603,692 gallons, in keeping with the Water Services Agreement

DISTRICT SIZE
The District has grown from 414 residential connections in 2020 to 519 residential connections in 2025. The estimated residential population is 1,326 people and is comprised of single-family units or 2.55 people per household.

DISTRICT WATER USE AND LOSSES
Water use data from the past five years, since 2020, are attached to this report. The five-year average daily water use was 289,795 gpd. The five-year average water loss as measured by total unmetered use was 2.27% or 200,091.4 gal/month, 6,578.3 gpd, or 4.96 GPCD. All metered use was residential and all unmetered use was classified as loss.

DISTRICT WATER USE DAILY PEAKING FACTOR
The five-year peak to average daily water use was 498,126 gpd / 289,795 gpd = 1.72 peaking ratio.

DISTRICT WATER USAGE PER CAPITA (GPCD) AND LIVING UNIT EQUIVALENT (LUE)
Current water use is 219.28 total gallons per capita per day (GPCD) as of December 2024. This equates to 290,770 gpd or 543.5 gpd/Living Equivalent Unit (GPD/LUE).

3. Water Conservation Goals

The average water use per connection use has continued to decrease during development at a rate of approximately 4% per year. The current water conservation goal is to continue to reduce the per connection use at a rate of 1% per year or (99% x 543.5 gpd) (99% x 219.28 GPCD).

The conservation goals will be addressed by demand management and reusing treated wastewater effluent for irrigation.

The wastewater treatment plant is capable of producing effluent that meets the 210 Type I requirements with a daily average of approximately 56,000 gpd. This treated effluent will be suitable for irrigation of any areas within the service area and will reduce the use of potable water via direct offset. The targeted water reduction can be seen in the table below.

Target Water Reduction - 10 Year Plan

Year	Base Flow (GPD/LUE)	Base Flow (GPCD)	Base Flow (GPD)	Target Percent Reduction	Target Flow (GPD/LUE)	Savings (GPD/LUE)	Savings (GPCD)	Savings (GPD)
1	543.5	219.28	290,770.0	1%	538.1	5.4	2.19	2,908
2	538.1	217.09	287,862.3	1%	532.7	5.4	2.17	2,879
3	532.7	214.92	284,983.7	1%	527.4	5.3	2.15	2,850
4	527.4	212.77	282,133.8	1%	522.1	5.3	2.13	2,821
5	522.1	210.64	279,312.5	1%	516.9	5.2	2.11	2,793
6	516.9	208.53	276,519.4	1%	511.7	5.2	2.09	2,765
7	511.7	206.45	273,754.2	1%	506.6	5.1	2.06	2,738
8	506.6	204.38	271,016.6	1%	501.5	5.1	2.04	2,710
9	501.5	202.34	268,306.5	1%	496.5	5.0	2.02	2,683
10	496.5	200.32	265,623.4	1%	491.5	5.0	2.00	2,656

4. Water Conservation Strategies

1. **Meter Calibration required.** The District tests and calibrates master meters to within the accuracy of plus or minus 5%, as well as all meters over 1" in size at intervals not to exceed one year. Meters smaller than 1" are tested and replaced according to manufacturer recommendations.
2. **Metered Usage required.** All connections, including any temporary connections, to the water distribution system are metered. All meters are tested and replaced as necessary, in accordance with manufacturer recommendations.
3. **Loss Audits Required.** The contracted water system operator is required to conduct water loss audits in accordance with all applicable laws.
4. **Continuing Education Required.** Continuing education and information on water conservation will be provided by the District to its customers primarily via informational material included in monthly retail billings. Customers will be informed of rebates for irrigation system equipment, evaluation of pools, and landscapes provided by LCRA to improve water use efficiency.
5. **Tiered Billing Structure.** The rate structure includes a base monthly cost and graduated volumetric rates that increase with usage in order to encourage limited water use. The billing system is capable of separating water-use per customer type into the following categories: residential, commercial, hydrant, tracking, and reclaimed. Further details about billing structure can be found in the currently adopted Rate Order.
6. **Contracts Required.** The primary means of implementation and enforcement shall be contractual, via the retail water service agreement each customer will be required to execute prior to service. Additionally, the Water Conservation Plan will be adopted by the

Board of Directors and established as official policy along with the service rates and impact fees.

7. **Coordination with LCRA.** The District will coordinate with the Lower Colorado Region (Region K) of the Lower Colorado Regional Water Planning Group to ensure consistency with the letter and intent of the regional water plans. Once this Water Conservation Plan is approved by the LCRA and adopted by the District, a copy will be made available to the Region K Planning Group.
8. **Irrigation Schedules.** The District's watering schedules allow irrigation for homeowners in accordance with LCRA requirements. The exact schedule can be found in the Drought Contingency Plan.
9. **Automatic Metering Infrastructure.** The Board anticipates reviewing the possibility to convert to automatic metering infrastructure as the current equipment reached its end of life anticipated in the next 10 years.

WATER LOSS PREVENTION

Water loss audits are conducted in accordance with TAC 31 §358.6. This includes visually inspecting areas near water mains for evidence of leaks; reviewing water meter readings for excessive values indicative of leaks; checking for unauthorized connections; and any other activities required by the state-trained auditor.

The following table shows water loss per year in millions of gallons based on the difference between the volume of water delivered at the District's master meter and the billing meters.

5-Year Annual Water Loss History

Year	Master Meter [MG]	Billing Meters [MG]	Flushing [MG]	Losses [MG]	Losses [%]
2020	103.6	103.3	0.08	-0.29	-0.28%
2021	104.7	97.1	0.09	-7.51	-7.17%
2022	117.2	111.5	0.12	-5.59	-4.77%
2023	102.3	103.2	0.10	1.00	0.97%
2024	107.0	106.6	0.23	-0.09	-0.09%

ADDITIONAL CONSERVATION STRATEGIES

The water conservation-related deed restrictions that are a part of the existing contract between the LCRA and Hays Reunion Ranch L.P. will continue to be implemented.

CONSERVATION LANDSCAPE BEST MANAGEMENT PRACTICES

Irrigation water use accounts for a significant portion of the water use in the District. Landscaping, soil, irrigation systems, and management practices have been specified to conserve water used for irrigation. Details of the Conservation Landscaping Strategies can be found in Appendix B

WATER REUSE

The wastewater treatment plant is capable of treating 80,000 gallons per day, producing effluent that meets the 210 Type I requirements with a daily average of approximately 56,000 gpd. This treated effluent will be suitable for irrigation of any areas within the service area and will reduce the use of potable water via direct offset.

Effluent Re-use facilities will be installed and upgrades to the WWTP will allow for a maximum amount of effluent to be used for irrigation. The district has entered into a Firm Water Conservation Cost-Share Program with LCRA to accomplish the irrigation of common areas in the development and reduce the use of purchased water for irrigation purposes.

The 11.48 acres of drip field are anticipated to require ½ inch of water per week or 24.87 Acre-feet per year or 8,105,000 gallons on average. All effluent not used to keep the fields in working order will be used for irrigation purposes. Irrigation requirements are estimated to be 65 ac-ft in a standard year or (65 ac-ft x 325,851) 21,180,315 gallons per year.

Total water reuse for irrigation is therefore the plant total effluent output less the effluent required to keep the drip fields in proper working order (20,440,000 – 8,105,000) 12,335,000 gallons (37.86 ac-ft) in a standard year.

The maximum amount of potable water to be offset by these facilities will vary by rainfall received as the need to keep the disposal fields turf viable must be maintained as a condition of its permitting. On wetter years the drip fields will require less effluent to maintain the disposal fields turf allowing for more effluent to be re-directed to the common area irrigation.

5. Wholesale Water Conservation Plans

Wholesale treated water customers must develop a drought contingency and a water conservation plan in accordance with LCRA Water Contract Rules. The plans must include a governing board resolution, ordinance or other official document noting that the plan has been formally adopted by the utility. Wholesale treated water customers must include in their wholesale water supply contracts the requirement that each successive wholesale customer develop and implement a water conservation and drought contingency plan.

6. Coordination with Regional Water Planning Group

The service area of the District is located within the Lower Colorado River Water Planning Area (Region K) of the State of Texas and the district has provided or will provide a copy of this water conservation plan to the regional water planning group at LCRA, c/o Water Contracts and Conservation, P.O. Box 220, Austin, Texas, 78703.

7. Authorization and Implementation

The District Board President, or his/her designee, is hereby authorized and directed to implement the applicable provisions of the plan. He/she will oversee the execution and implementation of the program and will be responsible for keeping adequate records for program verification. A signed and dated copy of this plan by the general manager, or his/her designee, will be sufficient to meet this requirement.

PLAN IMPLEMENTATION

The District has designated a Water Conservation & Drought Management Committee, who will be responsible for the implementation of this Water Conservation Plan. The Board President or his/her appointed representative may re-appoint this position. At that time, the District will inform LCRA about this personnel change.

Approved by: ~~Dennis B. Daniel, President~~ - Reunion Ranch WCID
John Genter, Vice President

Signature: John Genter

Date: 4/15/25

(Customer representative with enforcement authority)

Appendix A – Historical Water Use Data

WATER										
Month	Days	Monthly Water Usage (AF)	Monthly Water Usage (gallons)	Rolling 12-Month Avg. Water Usage (gallons)	Flow (GPD)	3-Month Avg (GPD)	Connections (LUE)	Growth (LUE)	Total Use per LUE (gpd)	Rolling Annual (GPD/LUE)
Jan-14	31	3.45	1,124,186		36,264	-	48	-	756	
Feb-14	28	4.19	1,364,136		48,719	-	53	5	919	
Mar-14	31	2.94	958,002		30,903	38,629	54	1	572	
Apr-14	30	4.45	1,450,037		48,335	42,652	54	0	895	
May-14	31	6.93	2,258,147		72,843	50,694	63	9	1,156	
Jun-14	30	5.85	1,906,228		63,541	61,573	67	4	948	
Jul-14	31	5.87	1,912,745		61,701	66,029	71	4	869	
Aug-14	31	4.25	1,384,867		44,673	56,639	76	5	588	
Sep-14	30	11.45	3,730,994		124,366	76,914	87	11	1,429	
Oct-14	31	11.15	3,633,239		117,201	95,414	91	4	1,288	
Nov-14	30	9.66	3,147,721		104,924	115,497	95	4	1,104	
Dec-14	31	3.81	1,241,492	2,009,316	40,048	87,391	95	0	422	912
Jan-15	31	3.12	1,016,655	2,000,355	32,795	59,256	98	3	335	877
Feb-15	28	2.81	915,641	1,962,981	32,701	35,182	102	4	321	827
Mar-15	31	2.17	707,097	1,942,072	22,810	29,435	101	-1	226	798
Apr-15	30	4.32	1,407,676	1,938,542	46,923	34,145	101	0	465	763
May-15	31	5.58	1,818,249	1,901,884	58,653	42,795	103	2	569	714
Jun-15	30	5.77	1,880,160	1,899,711	62,672	56,083	105	2	597	684
Jul-15	31	7.27	2,368,937	1,937,727	76,417	65,914	116	11	659	667
Aug-15	31	12.85	4,187,185	2,171,254	135,070	91,387	117	1	1,154	714
Sep-15	30	20.04	6,530,054	2,404,509	217,668	143,052	118	1	1,845	749
Oct-15	31	11.33	3,691,892	2,409,397	119,093	157,277	121	3	984	723
Nov-15	30	7.43	2,421,073	2,348,843	80,702	139,155	123	2	656	686
Dec-15	31	3.82	1,244,751	2,349,114	40,153	79,983	122	-1	329	678
Jan-16	31	2.41	785,301	2,329,835	25,332	48,729	126	4	201	667
Feb-16	29	6.62	2,157,134	2,433,292	74,384	46,623	131	5	568	688
Mar-16	31	7.12	2,320,059	2,567,706	74,841	58,186	139	8	538	714
Apr-16	30	9.88	3,219,408	2,718,684	107,314	85,513	158	19	679	732
May-16	31	8.52	2,776,251	2,798,517	89,556	90,570	165	7	543	729
Jun-16	30	9.42	3,069,516	2,897,630	102,317	99,729	174	9	588	729
Jul-16	31	19.66	6,406,231	3,234,071	206,653	132,842	180	6	1,148	769
Aug-16	31	18.46	6,015,209	3,386,407	194,039	167,670	182	2	1,066	762
Sep-16	30	14.98	4,881,248	3,249,006	162,708	187,800	183	1	889	683
Oct-16	31	15.81	5,151,704	3,370,657	166,184	174,310	194	11	857	672
Nov-16	30	15.46	5,037,656	3,588,706	167,922	165,605	201	7	835	687
Dec-16	31	10.06	3,278,061	3,758,148	105,744	146,617	210	9	504	701
Jan-17	31	6.32	2,059,378	3,864,321	66,432	113,366	214	4	310	710
Feb-17	28	7.29	2,375,454	3,882,515	84,838	85,671	216	2	393	696
Mar-17	31	7.05	2,297,250	3,880,614	74,105	75,125	225	9	329	678
Apr-17	30	9.97	3,248,734	3,883,058	108,291	89,078	229	4	473	661
May-17	31	15.28	4,979,003	4,066,620	160,613	114,336	233	4	689	673
Jun-17	30	15.81	5,151,704	4,240,136	171,723	146,876	233	0	737	686
Jul-17	31	21.05	6,859,164	4,277,881	221,263	184,533	238	5	930	668
Aug-17	31	30.67	9,993,850	4,609,434	322,382	238,456	243	5	1,327	689
Sep-17	30	23.49	7,654,240	4,840,517	255,141	266,262	246	3	1,037	702
Oct-17	31	21.63	7,048,157	4,998,554	227,360	268,295	247	1	920	707
Nov-17	30	20.49	6,676,687	5,135,140	222,556	235,019	263	16	846	708
Dec-17	31	11.50	3,747,287	5,174,242	120,880	190,265	274	11	441	703
Jan-18	31	7.01	2,284,216	5,192,979	73,684	139,040	275	1	268	699
Feb-18	28	8.01	2,610,067	5,212,530	93,217	95,927	283	8	329	694
Mar-18	31	6.80	2,215,787	5,205,741	71,477	79,459	283	0	253	688
Apr-18	30	13.41	4,369,662	5,299,152	145,655	103,450	288	5	506	690

WATER										
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May-18	31	22.53	7,341,423	5,496,020	236,820	151,317	289	1	819	701
Jun-18	30	27.64	9,006,522	5,817,255	300,217	227,564	289	0	1,039	726
Jul-18	31	27.78	9,052,141	6,000,003	292,005	276,347	302	13	967	729
Aug-18	31	35.85	11,681,758	6,140,662	376,831	323,018	308	6	1,223	721
Sep-18	30	30.56	9,958,007	6,332,643	331,934	333,590	308	0	1,078	724
Oct-18	31	11.32	3,688,633	6,052,682	118,988	275,918	312	4	381	679
Nov-18	30	9.52	3,102,102	5,754,800	103,403	184,775	317	5	326	636
Dec-18	31	7.72	2,515,570	5,652,157	81,147	101,180	331	14	245	620
Jan-19	31	7.86	2,561,189	5,675,238	82,619	89,057	338	7	244	618
Feb-19	28	8.91	2,903,332	5,699,677	103,690	89,152	347	9	299	615
Mar-19	31	11.63	3,789,647	5,830,832	122,247	102,852	353	6	346	623
Apr-19	30	17.23	6,153,400	5,979,477	187,147	137,695	358	5	523	624
May-19	31	18.24	6,215,100	5,885,617	191,727	167,040	363	5	528	600
Jun-19	30	23.99	7,816,100	5,786,415	260,537	213,137	371	8	702	572
Jul-19	31	34.77	11,330,100	5,976,245	365,487	272,583	381	10	959	571
Aug-19	31	41.71	13,592,100	6,135,440	438,455	354,826	389	8	1,127	563
Sep-19	30	39.92	13,007,500	6,389,564	433,583	412,508	399	10	1,087	564
Oct-19	31	35.18	11,463,300	7,037,453	369,784	413,941	407	8	909	608
Nov-19	30	15.97	5,204,500	7,212,653	173,483	325,617	415	8	418	616
Dec-19	31	12.93	4,212,800	7,354,089	135,897	226,388	424	9	321	622
Jan-20	31	11.93	3,888,400	7,464,690	125,432	144,937	426	2	294	626
Feb-20	29	10.93	3,560,500	7,519,454	122,776	128,035	432	6	284	625
Mar-20	31	14.20	4,628,400	7,589,350	149,303	132,504	443	11	337	624
Apr-20	30	22.95	7,478,100	7,699,742	249,270	173,783	453	10	550	626
May-20	31	27.38	8,921,400	7,925,267	287,787	228,787	459	6	627	635
Jun-20	30	36.00	11,730,000	8,251,425	391,000	309,352	463	4	844	646
Jul-20	31	43.79	14,267,500	8,496,208	460,242	379,676	468	5	983	648
Aug-20	31	47.39	15,441,900	8,650,358	498,126	449,789	474	6	1,051	642
Sep-20	30	30.65	9,987,100	8,398,658	332,903	430,424	481	7	692	609
Oct-20	31	34.00	11,079,800	8,366,700	357,413	396,147	485	4	737	595
Nov-20	30	24.21	7,888,300	8,590,350	262,943	317,753	489	4	538	605
Dec-20	31	15.60	5,084,300	8,662,975	164,010	261,455	496	7	331	606
Jan-21	31	13.10	4,267,100	8,694,533	137,648	188,200	498	2	276	604
Feb-21	28	13.96	4,548,900	8,776,900	162,461	154,706	502	4	324	608
Mar-21	31	18.82	6,133,000	8,902,283	197,839	165,983	504	2	393	612
Apr-21	30	25.80	8,406,200	8,979,625	280,207	213,502	506	2	554	612
May-21	31	22.60	7,365,000	8,849,925	237,581	238,542	506	0	470	599
Jun-21	30	32.82	10,693,700	8,763,567	356,457	291,415	516	10	691	587
Jul-21	31	36.22	11,803,300	8,558,217	380,752	324,930	519	3	734	566
Aug-21	31	42.30	13,784,000	8,420,058	444,645	393,951	523	4	850	549
Sep-21	30	43.99	14,334,500	8,782,342	477,817	434,404	524	1	912	567
Oct-21	31	32.68	10,647,200	8,746,292	343,458	421,973	526	2	653	560
Nov-21	30	22.04	7,182,900	8,687,508	239,430	353,568	527	1	454	553
Dec-21	31	18.11	5,902,200	8,755,667	190,394	257,761	528	1	361	556
Jan-22	31	13.90	4,528,000	8,777,408	146,065	191,963	529	1	276	556
Feb-22	28	12.90	4,202,800	8,748,567	150,100	162,186	530	1	283	552
Mar-22	31	22.82	7,434,900	8,857,058	239,835	178,667	531	1	452	557
Apr-22	30	30.41	9,908,000	8,982,208	330,267	240,067	532	1	621	563
May-22	31	35.50	11,568,400	9,332,492	373,174	314,425	533	1	700	582
Jun-22	30	44.68	14,557,400	9,654,467	485,247	396,229	534	1	909	600
Jul-22	31	46.57	15,175,700	9,935,500	489,539	449,320	534	0	917	616
Aug-22	31	39.75	12,953,200	9,866,267	417,845	464,210	534	0	782	610

WATER										
Month	Days	Monthly Water Usage (AF)	Monthly Water Usage (gallons)	Rolling 12-Month Avg. Water Usage (gallons)	Flow (GPD)	3-Month Avg (GPD)	Connections (LUE)	Growth (LUE)	Total Use per LUE (gpd)	Rolling Annual (GPD/LUE)
Sep-22	30	38.24	12,460,500	9,710,100	415,350	440,911	534	0	778	599
Oct-22	31	35.03	11,415,800	9,774,150	368,252	400,482	534	0	690	602
Nov-22	30	21.27	6,930,100	9,753,083	231,003	338,202	534	0	433	600
Dec-22	31	15.57	5,074,700	9,684,125	163,700	254,318	535	1	306	595
Jan-23	31	14.73	4,800,100	9,706,800	154,842	183,182	535	0	289	597
Feb-23	28	11.98	3,903,000	9,681,817	139,393	152,645	535	0	261	595
Mar-23	31	14.04	4,574,200	9,443,425	147,555	147,263	535	0	276	580
Apr-23	30	17.85	5,818,000	9,145,238	193,933	160,294	535	0	362	559
May-23	31	29.64	9,657,000	8,943,308	311,516	217,668	535	0	582	549
Jun-23	30	25.67	8,366,000	8,427,358	278,867	261,439	535	0	521	516
Jul-23	31	42.91	13,982,000	8,327,883	451,032	347,138	535	0	843	510
Aug-23	31	40.64	13,244,000	8,352,117	427,226	385,708	535	0	799	512
Sep-23	30	39.50	12,871,000	8,386,325	429,033	435,764	535	0	802	514
Oct-23	31	30.56	9,957,000	8,264,758	321,194	392,484	535	0	600	506
Nov-23	30	20.40	6,646,000	8,241,083	221,533	323,920	535	0	414	505
Dec-23	31	15.58	5,076,000	8,241,192	163,742	235,490	535	0	306	505
Jan-24	31	15.42	5,023,000	8,259,767	162,032	182,436	535	0	303	506
Feb-24	29	10.89	3,548,000	8,230,183	122,345	149,373	535	0	229	503
Mar-24	31	21.05	6,859,000	8,420,583	221,258	168,545	535	0	414	515
Apr-24	30	25.26	8,230,000	8,621,583	274,333	205,979	535	0	513	527
May-24	31	22.53	7,340,000	8,428,500	236,774	244,122	535	0	443	515
Jun-24	30	32.48	10,585,000	8,613,417	352,833	287,980	535	0	660	527
Jul-24	31	34.49	11,239,000	8,384,833	362,548	317,385	535	0	678	513
Aug-24	31	35.41	11,540,000	8,242,833	372,258	362,547	535	0	696	505
Sep-24	30	42.78	13,939,000	8,331,833	464,633	399,813	535	0	868	510
Oct-24	31	34.72	11,315,000	8,445,000	365,000	400,631	535	0	682	517
Nov-24	30	32.73	10,664,000	8,779,833	355,467	395,033	535	0	664	538
Dec-24	31	18.84	6,140,000	8,868,500	198,065	306,177	535	0	370	543

Appendix B - Landscape Conservation Standards

Planting Specifications:

1. Landscape Option: Builders shall offer homeowners a conservation landscape package such as the LCRA Hill Country Landscape Option (HCLO) which includes only plants selected from Central Texas native and adapted plant list such as the Grow Green Native and Adapted Landscape Plants Guide (available at www.austintexas.gov/department/grow-green) or other native plant source.
2. Turf Selection: Turf that is used as part of the landscape package shall be the appropriate variety for the site location and intended use (see below).

Variety	Drought Tolerance	Shade Tolerance	Heat Tolerance	Wear Tolerance	Water Tolerance	Growing Height
Bermuda Hybrids of Bermuda grass Tifgreen, Tifdwarf, Tifway and Santa Ana	Good	Poor	Good	Excellent	Medium	½ - 2 inches
Zoysia (Japonica)	Fair	Fair (JaMur)	Good	Good	Medium	¾ - 2 inches
Buffalo (Prairie or 609)	Excellent	Poor	Excellent	Good	Low	3 – 8 inches

3. Invasive Plants: Plants considered to be invasive or environmentally detrimental shall not be used. For a list of invasive plants reference the Texas administrative Code Title 4 Part 1 Chapter 19 Subchapter T Rule 19.30 paragraph a, and City of Austin watershed protection document "Central Texas Invasive Plants". https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=4&pt=1&ch=19&rl=300 https://www.austintexas.gov/sites/default/files/files/Watershed/growgreen/plantguide.pdf

4. Turf Limitation: In new homes, no more than 50 percent of the landscape may be planted in turf.

Soil Specifications:

1. Soil Depth: All irrigated and newly planted turf areas will have a minimum settled soil depth of at least 6 - 8 inches:
    a. builders and owners will import soil if needed to achieve sufficient soil depth;
    b. soil in these areas may be either native soil from the site or imported, improved soil;
    c. improved soil shall have a minimum organic content of 5 percent or will be an amended mix of no less than twenty percent compost blended with sand and loam (caliche shall not be considered as soil);

d. undisturbed, non-irrigated natural areas are exempt from these requirements.

2. Soil in new developments:
    a. native soil shall be stockpiled and reused on site;
    b. topsoil that is added to the site shall be incorporated in a 2 to 3 inch scarified transition layer to improve drainage.

Irrigation System Installation, Design, and Maintenance Specifications:

1. Irrigation systems: Landscape irrigation systems shall not be mandatory.
2. Installation: Irrigation systems, if installed, shall be designed, installed, inspected, and maintained according to TCEQ Chapter 344 Landscape Irrigation rules, as well as the following additional criteria:
    a. New irrigation systems utilizing an automatic controller must be capable of (at minimum) the following functions:
        i. Multiple irrigation programs, with at least three (3) start times per program; and
        ii. The ability to limit irrigation frequency to a weekly schedule as well as once every seven (7) days and once every fourteen (14) days.
3. Spray Irrigation: Spray irrigation for each home/business shall be limited to 2.5 times the foundation footprint, with a 12,000 sq foot maximum. The footprint may include both the house and the garage, but not the driveway or patio.
4. Common areas: Irrigation systems for entryways and common areas shall incorporate design and conservation features applicable to lot types within the subdivision. Drip irrigation in common areas will be used where feasible. Color-bed changes and turfgrass overseeding in common areas is prohibited
5. Watering Schedule: The developer, builder and/or homeowner association shall promote a watering schedule for both residences and common areas which conserves water and reduces run-off, as follows:

    March through October - 1/2 inch of water in accordance with the watering schedule

    November through February – turn off irrigation system
6. Additionally, as customers of the District, water users may irrigate outdoors using an inground irrigation system or hose-end sprinkler no more than the scheduled days and times as directed by the Board from the schedules indicated below:
    a. In accordance with the current Drought Contingency Plan.
    b. In a schedule approved by the Board by majority vote in accordance with contractual obligations.
7. Monitoring: Irrigation systems in common areas shall be monitored once per month, and any repairs will be made in a timely manner.
8. Time of Day Irrigation: Watering of common areas and residential landscapes shall be limited to the recommended watering schedule days and times unless irrigation is with reclaimed water or is necessary to meet regulatory requirements.

9. Automated irrigation systems shall not be required in any new landscape. However, if irrigation is installed it shall meet the guidelines outlined in this section.
10. All irrigation systems shall be installed in accordance with state law, Title 2 Texas Water Code, Chapter 34, and Title 30 Texas Administrative Code, Chapter 344 rules, as regulated and enforced by TCEQ. Irrigation contractors who install the irrigation systems must be TCEQ-licensed irrigators.
11. Drip irrigation shall be used for all irrigated landscaped areas, excluding turf. Turf can be irrigated with drip, but drip irrigation is not required.
12. Areas planted with turf shall be on separate zones from areas planted with shrubs, trees or perennials.
13. Hydro zoning of all areas that are irrigated automatically will be scheduled with plants with similar watering needs.
14. All automatic irrigation systems are required to have a rain sensor, a soil moisture sensor and/or a weather sensor connected to an irrigation controller to stop the irrigation cycle during and after a rainfall event. Rain sensors are to be installed in a location where rainfall is unobstructed. Rain sensors should be adjusted at the ¼-inch setting.
15. Sprinkler irrigation is prohibited in median strips, parking islands and all landscape areas less than 10 feet from curb to curb or 10 feet in width. Areas less than 10 feet curb-to-curb or 10 feet in width can be irrigated with low-volume irrigation. Low-volume irrigation (subsurface drip irrigation or drip irrigation) shall be installed in long landscape strips less than 10 feet in width to avoid runoff and overspray onto the hardscape.
16. All new residential irrigation systems are required to have pressure regulation where static operating pressure exceeds the sprinkler manufacturer's recommended operating range to eliminate extensive misting. These may include in-line pressure regulators, flow control valves, or sprinkler devices equipped with pressure regulation stems or nozzles.
17. Irrigation systems are to have a controller that features multiple start times, rain sensor capability, a water budget feature, and a non-volatile memory in case of power outage.
18. Scheduling recommendations shall be posted inside or immediately near the controller enclosure box for easy reference.
19. Homeowners shall be provided with a complete irrigation plan (or as-built drawing) that describes the location of each irrigation zone, control valves, and sprinkler devices.
20. Sprinkler systems shall be designed with no overspray onto the hardscape.
21. Sprinkler zones located at the bottom of sloped terrain along curbs, sidewalks, driveways, and other hardscapes should be equipped with devices that prevent low-head drainage after the sprinkler zone is turned off. In-line check valves and sprinkler heads with check valves already installed will help prevent low-head drainage.

22. No more than 50% or up to 7,000 square feet of the landscape shall be planted in turf. Longer leafed native grasses and wildflowers that use low amounts of water are not considered turf grass when determining how much turf grass is allowed.
23. Automatic spray irrigation for each home/business shall be limited to 2.5 times the foundation footprint, with a 12,000-square-foot maximum. The footprint may include both the house and the garage, but not the driveway or patio.

These standards are similar to the Greater Austin Homebuilder "Sensible Landscaping for Central Texas" guidelines developed with significant input from the LCRA. The standards are meant to provide builders and homeowners with a well-designed, water-efficient landscape. The standards can be adopted through ordinance, deed restriction or covenant where economically feasible and allowed by federal, state and local law.

Soil

1. There shall be no less than 3 inches of high-quality topsoil in planted areas.
2. Topsoil shall be native soil from the site, or fertile, friable, blended soil/compost blend. Topsoil shall not be of any admixture of subsoil or slag and shall be free of stones over 1½ inches in diameter, lumps, refuse, plants or their roots, sticks, noxious weeds, salts, soil sterilants or other material that is detrimental to plant growth. If topsoil is delivered, it shall be obtained from a well-drained site that is free of flooding. Topsoil shall not be delivered or spread while in a muddy condition.
3. Non-native topsoil shall contain not less than 25 percent organic matter (compost) that is blended through the soil.
4. Topsoil that is added to the site shall be incorporated into the existing surface in a two- to three-inch scarified transition layer to enable water to drain adequately through the different types of soil. Do not scarify within the drip line of existing trees that are to be retained.

Plant Choice

1. Plants used must be native and drought tolerant.
2. For a list of native plants reference University of Texas at Austin, Lady Bird Johnson Wildflower Collection – Plants for Central Texas, and the City of Austin watershed protection document "Native and Adapted Landscape Plants an Earthwise guide for Central Texas".
    a. https://www.wildflower.org/collections/

b. https://www.austintexas.gov/sites/default/files/files/Watershed/growgreen/plantguide.pdf

3. Turf grasses should be limited to low water use turfs. St. Augustine grasses should not be planted.
4. Invasive plants shall not be used.

Plant Prepping

1. A hole dug for the plant or tree should be two to three times wider than the container or root ball in which the plant is being stored, ensuring water is able to be absorbed by the plant's roots.
2. The existing soil should be blended with compost before the sodding or seeding with the recommended turfgrass.

Plant Placement and Spacing

Proper plant placement and spacing is critical to plant health and long-term landscape quality. Placing plants too close to buildings can cause problems with plant disease, as well as insect and structural problems. Proper plant spacing helps ensure good air flow and room for plants to mature without crowding. Consider the mature height and width of plants before planting them.

Mulch

1. All areas planted with trees, perennials and shrubs shall be finished with a **2- to 4-inch-deep** layer of high-quality 50/50 blend of organic mulch and compost blend.
2. Wood chip mulch shall be clean wood chips free of man-made debris, shredded into coarse pieces ranging from 1 to 3 inches.
3. Rock mulch shall be used in planting beds only as temporary mulch until full plant coverage is achieved, or as permanent mulch in areas with native shrubs and perennials.

Maintenance

1. Replenish mulch/compost blend in non-turf areas every two years at a minimum. Doing so during the fall and spring is recommended.
2. Aerate turfgrass within the first year of construction and twice a year after that (about Oct. 1 and March 1).

3. Top dress turfgrass areas with quality compost twice a year (about Oct. 1 and March 1) at a depth of ¼ to ½ inch following the aeration and drag or rake it into the canopy and aeration holes.
4. Set the automatic irrigation system back to a normal schedule after the establishment period.

Appendix C – New Pool Construction Standards

A. Private residential swimming pools shall not be installed with sand media filters.
B. Pool water features installed with public swimming pools or private residential swimming pools must be designed so the water feature can be turned off without affecting the filtering capabilities of the pool. Automatic pool fill features must be designed so they can be turned off in both public and private residential swimming pools.
C. Pools with shared water between the pool and spa shall be designed so water can be shared without the necessity of an above-ground water feature that cannot be turned off. If a water feature between the spa and the pool exists, the default setting will be for it to be turned off.
D. Automatic pool fill features must include an automatic pool shut-off feature.
E. Vanishing or negative edge pools must be designed with catch basins large enough to prevent splashing that leads to increased water use.
F. Backwash systems must be designed so they may be turned off.
G. Pool skimmers should be managed in such a way as to minimize water consumption. The range of allowable water within the skimmer fill range should allow for several inches of evaporative loss prior to filling. All residential swimming pools shall have a hose end timer installed at the nearest hose bib location. In addition, a hose bib back-flow prevention device must be connected to the hose bib fixtures nearest to the pool.