

Projected Exempt Groundwater Use Estimates

Groundwater Management Area 12

TWDB Estimates

May 2020

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Texas Water Development (TWDB) staff has developed draft projected estimates of rural domestic, livestock, mining, and rig supply exempt uses. These estimates are based on a comprehensive survey of groundwater wells in the TWDB Groundwater Database (GWDB), the TWDB Water Use Survey, the 2017 State Water Plan (SWP), the newest projected demand estimates for the upcoming 2021 SWP, and population data from the Texas Demographic Center.

Note: Some categories of these estimates may not represent actual use from exempt wells since the GWDB does not include all wells in existence.

Projected Exempt Groundwater Use Estimates Acre-feet per year

Brazos Valley GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos iver Alluvium	62	62	64	64	65	66	66
Carrizo-Wilcox	3,913	3,920	3,930	3,938	3,945	3,953	3,953
Gulf Coast	11	13	15	18	19	21	22
Other	122	137	154	172	182	198	199
Queen City	274	358	343	313	288	282	282
Sparta	893	1228	1162	1035	930	902	900
Yegua-Jackson	488	567	651	744	796	878	887
Total	5,763	6,285	6,319	6,284	6,225	6,300	6,309

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos iver Alluvium	6	6	8	8	9	10	10
Carrizo-Wilcox	72	79	89	97	104	112	112
Gulf Coast	11	13	15	18	19	21	22
Other	78	93	110	128	138	154	155
Queen City	56	65	76	87	94	104	105
Sparta	173	207	243	283	305	340	344
Yegua-Jackson	398	477	561	654	706	788	797

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos iver Alluvium	56	56	56	56	56	56	56
Carrizo-Wilcox	395	395	395	395	395	395	395
Gulf Coast	0	0	0	0	0	0	0
Other	44	44	44	44	44	44	44
Queen City	61	61	61	61	61	61	61
Sparta	93	93	93	93	93	93	93
Yegua-Jackson	90	90	90	90	90	90	90

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, the TWDB Groundwater Database, and Brazos Valley GCD input.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Brazos Valley GCD (continued)

Estimated Mining and Rig Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	3,446	3,446	3,446	3,446	3,446	3,446	3,446
Queen City	157	232	206	165	133	117	116
Sparta	627	928	826	659	532	469	463

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, the TWDB Groundwater Database, and Brazos Valley GCD input.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Fayette County GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	38	38	38	38	38	38	38
Gulf Coast	44	44	44	44	44	44	44
Other	183	193	202	209	211	217	221
Queen City	6	7	7	7	8	8	8
Sparta	140	147	151	154	157	159	161
Yegua-Jackson	856	901	927	949	968	982	998
Total	1,266	1,329	1,367	1,400	1,431	1,452	1,476

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	25	25	25	25	31	30	31
Other	123	133	142	149	151	157	161
Queen City	6	7	7	7	8	8	8
Sparta	61	68	71	75	78	80	82
Yegua-Jackson	404	449	475	497	516	530	546

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	38	38	38	38	38	38	38
Gulf Coast	19	19	19	19	19	19	19
Other	60	60	60	60	60	60	60
Sparta	79	79	79	79	79	79	79
Yegua-Jackson	452	452	452	452	452	452	452

Estimates derived from contracted work by Daniel B. Stephens and Associates for Fayette County GCD.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates Acre-feet per year

Lost Pines GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	229	247	270	303	347	406	413
Other	60	64	68	75	83	95	96
Queen City	98	102	107	113	121	132	133
Sparta	33	35	37	40	44	49	49
Yegua-Jackson	16	17	17	17	17	18	18
Total	436	465	499	548	612	700	709

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	72	90	113	146	190	249	256
Other	14	18	22	29	37	49	50
Queen City	16	20	25	31	39	50	51
Sparta	8	10	12	15	19	24	24
Yegua-Jackson	2	3	3	3	3	4	4

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	123	123	123	123	123	123	123
Other	46	46	46	46	46	46	46
Queen City	82	82	82	82	82	82	82
Sparta	25	25	25	25	25	25	25
Yegua-Jackson	14	14	14	14	14	14	14

Estimated Agricultural Exempt Use (by aquifer) *

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	34	34	34	34	34	34	34

* Lost Pines GCD Rules include exemptions for wells used for agricultural use that are incapable of producing more than 25,000 gallons per day. According to information in the TWDB groundwater database, there is one irrigation well that qualifies for this exemption in the District (state well #5839904).

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, and the TWDB Groundwater Database.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Mid-East Texas GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	358	360	372	427	514	695	718
Other	30	29	31	42	59	98	103
Queen City	78	77	79	90	109	149	154
Sparta	27	26	28	34	45	70	73
Yegua-Jackson	14	14	14	18	24	37	38
Total	507	506	524	611	751	1,049	1,086

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	230	232	244	299	386	567	590
Other	30	29	31	42	59	98	103
Queen City	31	30	32	43	62	102	107
Sparta	19	18	20	26	37	62	65
Yegua-Jackson	10	10	10	14	20	33	34

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	128	128	128	128	128	128	128
Queen City	47	47	47	47	47	47	47
Sparta	8	8	8	8	8	8	8
Yegua-Jackson	4	4	4	4	4	4	4

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, and the TWDB Groundwater Database.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Post Oak Savannah GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	14	14	14	14	14	14	14
Carrizo-Wilcox	465	469	473	483	494	504	505
Other	85	86	88	90	91	93	93
Queen City	236	239	242	248	252	255	256
Sparta	67	67	67	67	67	67	67
Yegua-Jackson	210	213	216	221	225	229	229
Total	1,077	1,088	1,100	1,123	1,143	1,162	1,164

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	0	0	0	0	0	0	0
Carrizo-Wilcox	265	269	273	283	294	304	305
Other	51	52	54	56	57	59	59
Queen City	125	128	131	137	141	144	145
Sparta	0	0	0	0	0	0	0
Yegua-Jackson	119	122	125	130	134	138	138

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	14	14	14	14	14	14	14
Carrizo-Wilcox	200	200	200	200	200	200	200
Other	34	34	34	34	34	34	34
Queen City	111	111	111	111	111	111	111
Sparta	67	67	67	67	67	67	67
Yegua-Jackson	91	91	91	91	91	91	91

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, and the TWDB Groundwater Database.

Values are rounded to the nearest acre-foot.