

Projected Exempt Groundwater Use Estimates

Groundwater Management Area 14

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

Bluebonnet GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	1,505	1,511	1,519	1,530	1,541	1,554	1,505
Gulf Coast	20,087	20,267	20,493	20,801	21,148	21,534	20,087
Other	422	424	426	429	433	437	422
Queen City	25	25	25	25	25	25	25
Yegua-Jackson	547	554	558	564	572	579	547
Total	22,586	22,781	23,021	23,349	23,719	24,129	22,586

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	56	62	70	81	92	105	106
Gulf Coast	3,415	3,595	3,821	4,129	4,476	4,862	4,903
Other	54	56	58	61	65	69	70
Yegua-Jackson	233	240	244	250	258	265	266

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	185	185	185	185	185	185	185
Gulf Coast	1,296	1,296	1,296	1,296	1,296	1,296	1,296
Other	44	44	44	44	44	44	44
Queen City	25	25	25	25	25	25	25
Yegua-Jackson	210	210	210	210	210	210	210

Estimated Agricultural Exempt Use (by aquifer) *

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	1,264	1,264	1,264	1,264	1,264	1,264	1,264
Gulf Coast	15,376	15,376	15,376	15,376	15,376	15,376	15,376
Other	324	324	324	324	324	324	324
Yegua-Jackson	104	104	104	104	104	104	104

* Bluebonnet GCD Rules include exemptions for agricultural wells.

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, the TWDB Groundwater Database, and 2018 TWDB Irrigation Estimates.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Brazoria County GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	6,426	6,840	7,161	7,543	7,940	8,371	8,417
Total	6,426	6,840	7,161	7,543	7,940	8,371	8,417

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	2,368	2,782	3,103	3,485	3,882	4,313	4,359

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	808	808	808	808	808	808	808

Estimated Agricultural Exempt Use (by aquifer) *

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	3,250	3,250	3,250	3,250	3,250	3,250	3,250

* Brazoria County GCD Rules include exemptions for water wells used only for agriculture.

Estimates derived using Texas State Demographic Center Data, TWDB Water Use Survey data, TWDB water demand projections, the TWDB Groundwater Database, and 2018 TWDB Irrigation Estimates.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

Lone Star GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	8,060	10,007	12,203	14,899	18,360	22,545	23,014
Total	8,060	10,007	12,203	14,899	18,360	22,545	23,014

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	7,550	9,497	11,693	14,389	17,850	22,035	22,504

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	510	510	510	510	510	510	510

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

Lower Trinity GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	2,375	2,569	2,718	2,869	3,005	3,122	3,134
Other	8	9	9	10	10	11	11
Yegua-Jackson	84	89	92	97	102	107	108
Total	2,467	2,667	2,819	2,976	3,117	3,240	3,253

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	2,259	2,453	2,602	2,753	2,889	3,006	3,018
Other	8	9	9	10	10	11	11
Yegua-Jackson	82	87	90	95	100	105	106

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	116	116	116	116	116	116	116
Yegua-Jackson	2	2	2	2	2	2	2

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**

Southeast Texas GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	4,627	4,782	4,897	5,036	5,191	5,360	5,378
Yegua-Jackson	12	11	11	11	11	11	11
Total	4,639	4,793	4,908	5,047	5,202	5,371	5,389

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	3,640	3,787	3,934	4,105	4,293	4,479	4,498
Yegua-Jackson	12	11	11	11	11	11	11

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	860	860	860	860	860	860	860

Estimated Agricultural Exempt Use (by aquifer) *

Aquifer	2020	2030	2040	2050	2060	2070	2080
Gulf Coast	127	135	103	71	38	21	20

* Southeast Texas GCD Rules include exemptions for wells used only for agriculture purposes that are incapable of producing more than 100,000 gallons per day.

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

Values are rounded to the nearest acre-foot.