

Exempt Groundwater Use Estimates

Groundwater Management Area 1

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

Hemphill County UWCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	2,859	2,746	2,635	2,332	2,371	2,467	2,453

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	212	215	217	220	222	225	225

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	936	960	986	1,014	1,043	1,073	1,076

Estimated Mining and Rig Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	925	705	498	293	89	27	24

Estimated Public Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	786	866	934	1,009	1,079	1,145	1,152

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**

High Plains UWCD No. 1

Total Estimated Exempt Use by aquifer

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	1,048	1,048	1,048	1,048	1,048	1,048	1,048
Ogallala	2,446	2,446	2,446	2,446	2,446	2,446	2,446
Total	3,494	3,494	3,494	3,494	3,494	3,494	3,494

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	1,003	1,003	1,003	1,003	1,003	1,003	1,003
Ogallala	2,341	2,341	2,341	2,341	2,341	2,341	2,341

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	44	44	44	44	44	44	44
Ogallala	102	102	102	102	102	102	102

Estimated Mining and Rig Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	1	1	1	1	1	1	1
Ogallala	3	3	3	3	3	3	3

Estimates derived from High Plains UWCD No. 1.

Values are rounded to the nearest acre-foot.

Projected Exempt Groundwater Use Estimates
Acre-feet per year

North Plains GCD

Total Estimated Exempt Use by aquifer

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	179	205	221	238	257	278	280
Ogallala	18,963	20,517	21,719	23,009	24,394	25,887	26,041
Rita Blanca	192	206	217	228	240	253	255
Total	19,334	20,928	22,157	23,475	24,891	26,418	26,576

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	170	195	211	228	247	268	270
Ogallala	18,237	19,761	20,937	22,200	23,558	25,021	25,172
Rita Blanca	185	199	210	221	233	246	248

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	9	10	10	10	10	10	10
Ogallala	726	756	782	809	836	866	869
Rita Blanca	7	7	7	7	7	7	7

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

Panhandle GCD

Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Blaine	1	1	1	1	1	1	1
Dockum	233	257	268	279	292	304	306
Ogallala	5,378	5,721	5,797	5,908	6,141	6,460	6,494
Other	493	546	563	583	603	625	627
Total	6,105	6,525	6,629	6,771	7,037	7,390	7,428

Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Blaine	1	1	1	1	1	1	1
Dockum	19	20	21	22	24	25	26
Ogallala	1,264	1,349	1,446	1,565	1,695	1,836	1,851
Other	68	69	72	76	80	84	85

Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Dockum	214	237	247	257	268	279	280
Ogallala	3,512	3,954	4,106	4,267	4,438	4,623	4,642
Other	425	477	491	507	523	541	542

Estimated Mining and Rig Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Ogallala	602	418	245	76	8	1	1

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

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