

# Projected Exempt Groundwater Use Estimates

Groundwater Management Area 8

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**

**Central Texas GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Ellenburger-San Saba	1,920	2,143	2,326	2,533	2,713	2,874	2,891
Hickory	56	63	68	74	79	84	85
Marble Falls	56	63	68	74	79	84	85
Other	169	189	205	223	239	253	255
Trinity	509	568	616	671	719	761	766
<b>Total</b>	<b>1,920</b>	<b>2,143</b>	<b>2,326</b>	<b>2,533</b>	<b>2,713</b>	<b>2,874</b>	<b>2,891</b>

**Estimated Domestic Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Ellenburger-San Saba	1,329	1,552	1,735	1,942	2,122	2,283	2,300
Hickory	39	46	51	57	62	67	68
Marble Falls	39	46	51	57	62	67	68
Other	117	137	153	171	187	201	203
Trinity	352	411	459	514	562	604	609

**Estimated Livestock Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Ellenburger-San Saba	591	591	591	591	591	591	591
Hickory	17	17	17	17	17	17	17
Marble Falls	17	17	17	17	17	17	17
Other	52	52	52	52	52	52	52
Trinity	157	157	157	157	157	157	157

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**

**Clearwater UWCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Edwards (Balcones Fault Zone)	362	398	438	482	530	583	641
Other	790	807	824	842	860	878	897
Trinity	841	905	976	1,053	1,138	1,231	1,333
<b>Total</b>	<b>1,993</b>	<b>2,110</b>	<b>2,238</b>	<b>2,377</b>	<b>2,527</b>	<b>2,692</b>	<b>2,871</b>

**Estimated Domestic Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Edwards (Balcones Fault Zone)	232	255	281	309	340	374	411
Other	328	338	348	358	369	380	392
Trinity	609	670	737	811	892	981	1,079

**Estimated Livestock Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Edwards (Balcones Fault Zone)	130	143	157	173	190	209	230
Other	462	469	476	483	490	498	505
Trinity	232	235	239	243	246	250	254

Estimates derived using Clearwater UWCD data.

Values are rounded to the nearest acre-foot.

**Projected Exempt Groundwater Use Estimates**  
**Acre-feet per year**

**Middle Trinity GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Brazos River Alluvium	3	3	3	4	4	4	4
Cross Timbers	255	255	255	255	256	256	256
Other	387	388	388	389	389	389	389
Trinity	4,619	4,791	4,923	5,068	5,233	5,391	5,407
<b>Total</b>	<b>5,264</b>	<b>5,437</b>	<b>5,569</b>	<b>5,716</b>	<b>5,882</b>	<b>6,040</b>	<b>6,056</b>

**Estimated Domestic Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Brazos River Alluvium	3	3	3	4	4	4	4
Cross Timbers	8	8	8	8	9	9	9
Other	20	21	21	22	22	22	22
Trinity	2,282	2,454	2,586	2,731	2,896	3,054	3,070

**Estimated Livestock Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	247	247	247	247	247	247	247
Other	367	367	367	367	367	367	367
Trinity	2,337	2,337	2,337	2,337	2,337	2,337	2,337

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**

**North Texas GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	2,149	2,149	2,149	2,149	2,149	2,149	2,149
Woodbine	2,379	2,379	2,379	2,379	2,379	2,379	2,379
<b>Total</b>	<b>4,528</b>	<b>4,528</b>	<b>4,528</b>	<b>4,528</b>	<b>4,528</b>	<b>4,528</b>	<b>4,528</b>

Estimated Domestic Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	615	615	615	615	615	615	615
Woodbine	679	679	679	679	679	679	679

Estimated Livestock Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	727	727	727	727	727	727	727
Woodbine	803	803	803	803	803	803	803

Estimated Mining and Rig Supply Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	58	58	58	58	58	58	58
Woodbine	173	173	173	173	173	173	173

Estimated Irrigation Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	608	608	608	608	608	608	608
Woodbine	672	672	672	672	672	672	672

\* North Texas GCD rules include exemptions for wells used for agricultural irrigation, commercial, and public supply use.  
 Estimates derived using North Texas GCD input.  
 Values are rounded to the nearest acre-foot.

**Projected Exempt Groundwater Use Estimates**  
**Acre-feet per year**

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Estimated Commercial Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	9	9	9	9	9	9	9
Woodbine	8	8	8	8	8	8	8

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Estimated Public Water Supply Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	111	111	111	111	111	111	111
Woodbine	122	122	122	122	122	122	122

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\* North Texas GCD rules include exemptions for wells used for agricultural irrigation, commercial, and public supply use.  
 Estimates derived using North Texas GCD input.  
 Values are rounded to the nearest acre-foot.

**Projected Exempt Groundwater Use Estimates**  
**Acre-feet per year**

**Northern Trinity GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	27	27	27	27	27	27	27
Trinity	1,785	1,949	2,140	2,283	2,415	2,559	2,574
Woodbine	838	906	984	1,043	1,097	1,156	1,163
<b>Total</b>	<b>2,650</b>	<b>2,882</b>	<b>3,151</b>	<b>3,353</b>	<b>3,539</b>	<b>3,742</b>	<b>3,764</b>

Estimated Domestic Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Trinity	1,677	1,841	2,032	2,175	2,307	2,451	2,466
Woodbine	689	757	835	894	948	1,007	1,014

Estimated Livestock Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	24	24	24	24	24	24	24
Trinity	24	24	24	24	24	24	24
Woodbine	47	47	47	47	47	47	47

Estimated Agricultural Exempt Use (by aquifer) \*

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	3	3	3	3	3	3	3
Trinity	84	84	84	84	84	84	84
Woodbine	102	102	102	102	102	102	102

\* Northern Trinity GCD rules include exemptions for wells used for agricultural irrigation use.

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)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	1,443	1,451	1,460	1,484	1,508	1,532	1,534

Estimated Domestic Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	615	623	632	656	680	704	706

Estimated Livestock Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Other	828	828	828	828	828	828	828

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

### Prairielands GCD

#### Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	31	33	34	35	35	36	36
Other	75	78	79	81	82	85	85
Trinity	944	994	1,032	1,068	1,104	1,138	1,141
Woodbine	396	408	416	426	436	447	448
<b>Total</b>	<b>1,446</b>	<b>1,513</b>	<b>1,561</b>	<b>1,610</b>	<b>1,657</b>	<b>1,706</b>	<b>1,710</b>

#### Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Brazos River Alluvium	31	33	34	35	35	36	36
Other	40	43	44	46	47	50	50
Trinity	604	654	692	728	764	798	801
Woodbine	169	181	189	199	209	220	221

#### Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Other	35	35	35	35	35	35	35
Trinity	325	325	325	325	325	325	325
Woodbine	215	215	215	215	215	215	215

#### Estimated Agricultural Exempt Use (by aquifer) \*

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	15	15	15	15	15	15	15
Woodbine	12	12	12	12	12	12	12

\* Prairielands GCD Rules include exemptions for agricultural wells not capable of producing more than 36,000 gallons per day. According to the TWDB groundwater database, there are two irrigation wells that qualify for this exemption (state well #3246210 and #3240906).

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

### Red River GCD

#### Total Estimated Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	144	144	144	144	144	144	144
Woodbine	2,161	2,161	2,161	2,161	2,161	2,161	2,161
<b>Total</b>	<b>2,305</b>	<b>2,305</b>	<b>2,305</b>	<b>2,305</b>	<b>2,305</b>	<b>2,305</b>	<b>2,305</b>

#### Estimated Domestic Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	63	63	63	63	63	63	63
Woodbine	950	950	950	950	950	950	950

#### Estimated Livestock Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	51	51	51	51	51	51	51
Woodbine	770	770	770	770	770	770	770

#### Estimated Mining and Rig Supply Exempt Use (by aquifer)

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	2	2	2	2	2	2	2
Woodbine	30	30	30	30	30	30	30

#### Estimated Irrigation Exempt Use (by aquifer) \*

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	1	1	1	1	1	1	1
Woodbine	7	7	7	7	7	7	7

#### Estimated Commercial Exempt Use (by aquifer) \*

Aquifer	2020	2030	2040	2050	2060	2070	2080
Trinity	27	27	27	27	27	27	27
Woodbine	404	404	404	404	404	404	404

\* Red River GCD Rules additionally exempt commercial and agricultural use, including irrigation.

Estimates derived using Red River GCD input.

Values are rounded to the nearest acre-foot.

**Projected Exempt Groundwater Use Estimates**  
**Acre-feet per year**

**Saratoga UWCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	7	7	7	7	7	7	7
Ellenburger-San Saba	24	25	26	26	27	28	28
Marble Falls	9	9	9	9	9	9	9
Other	31	32	33	33	34	35	35
Trinity	278	287	294	302	309	316	316
<b>Total</b>	<b>349</b>	<b>360</b>	<b>369</b>	<b>377</b>	<b>386</b>	<b>395</b>	<b>395</b>

**Estimated Domestic Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Ellenburger-San Saba	10	11	12	12	13	14	14
Marble Falls	2	2	2	2	2	2	2
Other	10	11	12	12	13	14	14
Trinity	107	116	123	131	138	145	145

**Estimated Livestock Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	7	7	7	7	7	7	7
Ellenburger-San Saba	14	14	14	14	14	14	14
Marble Falls	7	7	7	7	7	7	7
Other	21	21	21	21	21	21	21
Trinity	171	171	171	171	171	171	171

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**

**Southern Trinity GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Brazos River Alluvium	641	662	681	705	732	760	763
Trinity	568	591	612	637	667	697	701
<b>Total</b>	<b>1,209</b>	<b>1,253</b>	<b>1,293</b>	<b>1,342</b>	<b>1,399</b>	<b>1,457</b>	<b>1,464</b>

**Estimated Domestic Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Brazos River Alluvium	438	459	478	502	529	557	560
Trinity	478	501	522	547	577	607	611

**Estimated Livestock Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Brazos River Alluvium	203	203	203	203	203	203	203
Trinity	90	90	90	90	90	90	90

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**

**Upper Trinity GCD**

**Total Estimated Exempt Use (by aquifer)**

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	2,950	3,080	3,210	3,341	3,471	3,601	3,731
Trinity	16,882	18,588	20,295	22,001	23,707	24,414	27,120
<b>Total</b>	<b>19,832</b>	<b>21,668</b>	<b>23,505</b>	<b>25,342</b>	<b>27,178</b>	<b>28,015</b>	<b>30,851</b>

Estimated Domestic Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	2,111	2,241	2,371	2,502	2,632	2,762	2,892
Trinity	9,988	11,694	13,401	15,107	16,813	18,520	20,226

Estimated Livestock Exempt Use (by aquifer)

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	242	242	242	242	242	242	242
Trinity	478	478	478	478	478	478	478

Estimated Agricultural Exempt Use (by aquifer) \*

<b>Aquifer</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>
Cross Timbers	597	597	597	597	597	597	597
Trinity	6,416	6,416	6,416	6,416	6,416	6,416	6,416

\* Upper Trinity GCD Rules additionally exempt agricultural use, including irrigation.

Estimates derived by Upper Trinity GCD.

Values are rounded to the nearest acre-foot.