BRAZOS G
WATER PLANNING GROUP

# GROUNDWATER COMMITTEE MEETING

**10:00 A.M. – November 29, 2023**

**BRAZOS RIVER AUTHORITY**

**4600 COBBS DR., WACO, TX 76710**

BRAZOS G
WATER PLANNING GROUP

1. CALL MEETING TO ORDER

2. INVOCATION

3. NOTICE OF MEETING

4. ATTENDANCE AND ANNOUNCEMENTS

5. PUBLIC INPUT (limited to 5 minutes each)

BRAZOS G
WATER PLANNING GROUP

# 6. Review of Groundwater Availability

BRAZOS G
WATER PLANNING GROUP

# Groundwater Availability Analysis

Prepared for
Brazos G Groundwater Committee

*Advanced Groundwater Solutions, LLC*

November 29, 2023

AGS
Advanced Groundwater Solutions, LLC

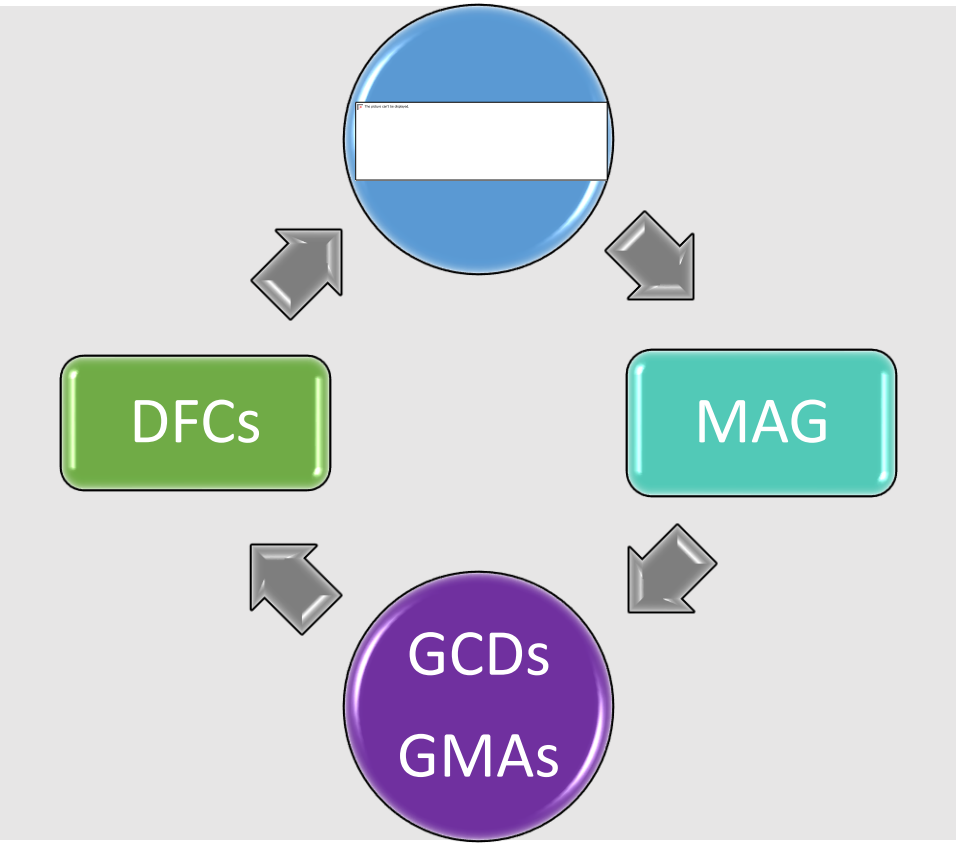
carollo

# Outline

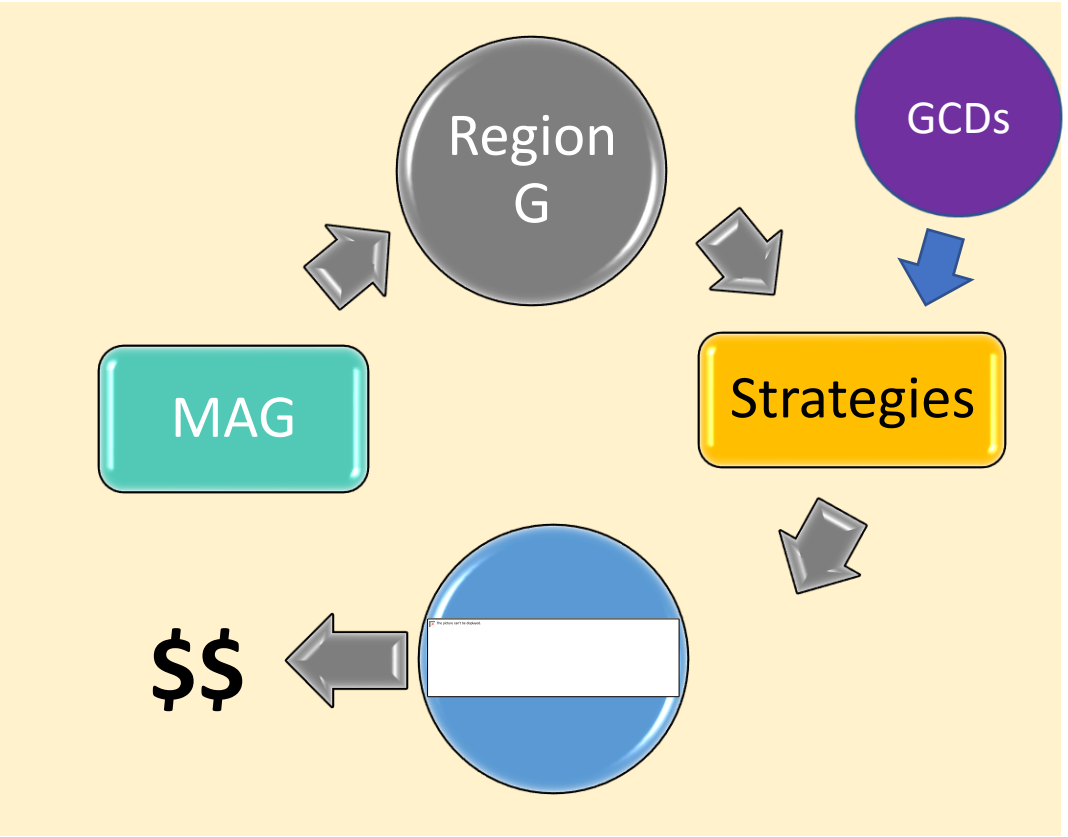
1. Joint groundwater planning and Region G groundwater overview
2. Review and compare current groundwater availability to last planning cycle
3. Discuss decreases in availability (MAG and non-MAG) from the last planning cycle, potential solutions
4. Miscellaneous issues/questions

# Texas Groundwater Planning Cycle

## Joint Groundwater Planning




## Regional Water Planning



# Joint Groundwater Planning and Region G

- Region G includes 5 GMAs: 6, 7, 8, 12, and 14
- Region G includes 13 GCDs
- 16 of 37 counties within Region G do not have a GCD
- Region G includes 6 major aquifers and 11 minor aquifers, and several “other” aquifers
- Groundwater accounts for 800,000 to 900,000 afy of availability for Region G

# GCD Management Plan Status

| District | Date Plan Approved |
|---|---|
| Bluebonnet Groundwater Conservation District | 1/27/2022 |
| Brazos Valley Groundwater Conservation District | 5/13/2019 |
| Clear Fork Groundwater Conservation District | 2/25/2022 |
| Clearwater Groundwater Conservation District | 12/20/2020 |
| Lost Pines Groundwater Conservation District | 9/21/2022 |
| Middle Trinity Groundwater Conservation District | 7/27/2022 |
| Post Oak Savannah Groundwater Conservation District | 11/15/2022 |
| Prairielands Groundwater Conservation District | 5/31/2019 |
| Rolling Plains Groundwater Conservation District | 8/25/2020 |
| Saratoga Groundwater Conservation District | 8/31/2020 |
| Southern Trinity Groundwater Conservation District | 9/9/2021 |
| Upper Trinity Groundwater Conservation District | 7/6/2020 |
| Wes-Tex Groundwater Conservation District | 3/18/2020 |

# Joint Groundwater Planning Status

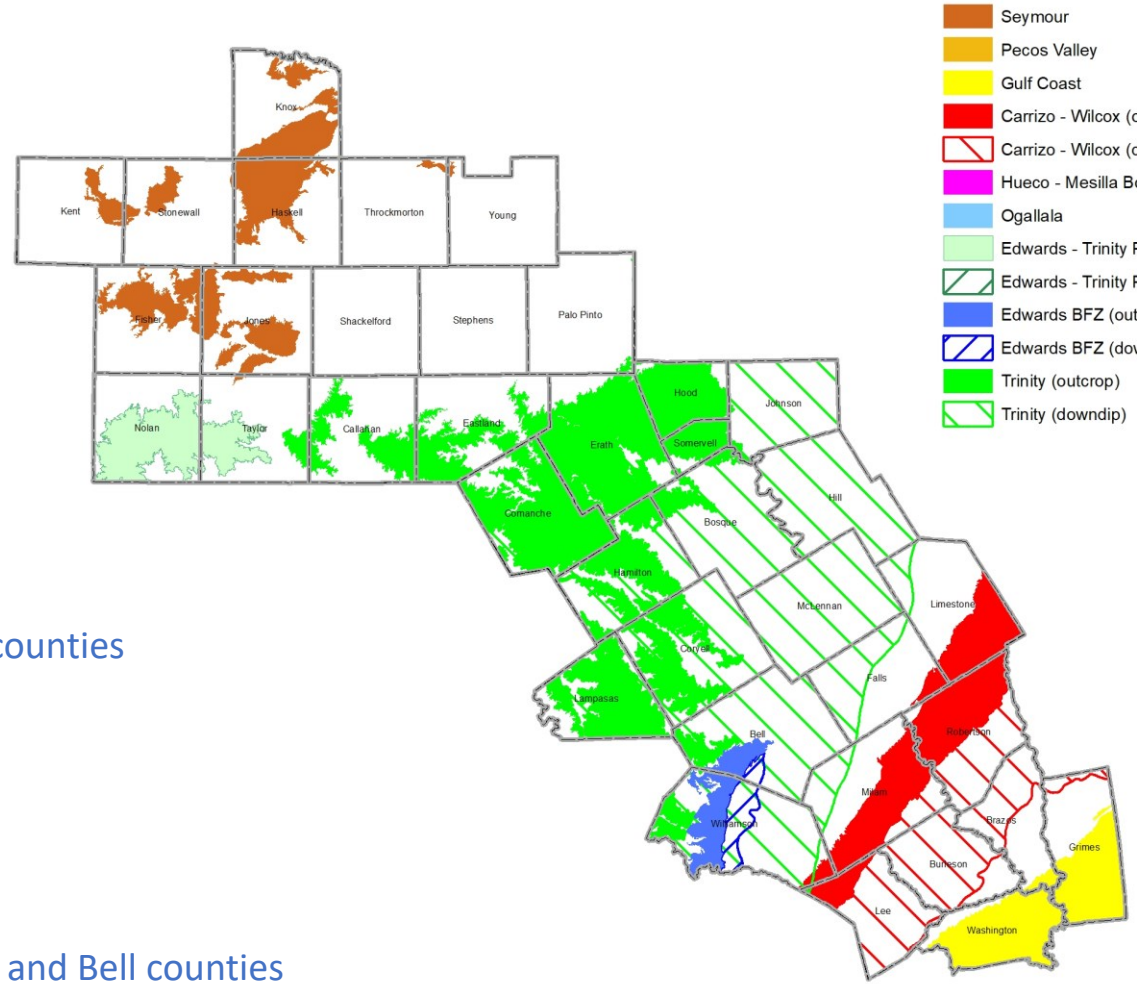
| Groundwater Management Area 6 | | | |
|---|---|---|---|
| Clear Fork GCD, Rolling Plains GCD | | | |
| **Aquifer** | **Major or Minor Aquifer?** | **Desired Future Conditions Status** | **Modeled Available Groundwater Status** |
| Seymour | Major | 11/18/2021 | Submitted 11/14/2022, GR 21-011 MAG |
| Dockum | Minor | 11/18/2021 | Submitted 11/14/2022, GR 21-011 MAG |
| Blaine | Minor | 11/18/2021 | Submitted 11/14/2022, GR 21-011 MAG |
| Cross Timbers | Minor | No DFC adopted | - |
| Groundwater Management Area 7 | | | |
| Wes-Tex GCD | | | |
| **Aquifer** | **Major or Minor Aquifer?** | **Desired Future Conditions Status** | **Modeled Available Groundwater Status** |
| Edwards-Trinity (Plateau) | Major | 8/19/2021 | Submitted 8/12/2022, GR 21-012 MAG |
| Dockum | Minor | No DFC adopted | - |
| Groundwater Management Area 8 | | | |
| Clearwater UWCD, Middle Trinity GCD, Post Oak Savannah GCD, Prarielands GCD, Saratoga UWCD, Southern Trinity GCD, Upper Trinity GCD | | | |
| **Aquifer** | **Major or Minor Aquifer?** | **Desired Future Conditions Status** | **Modeled Available Groundwater Status** |
| Trinity | Major | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Edwards (BFZ) | Major | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Brazos River Alluvium | Minor | No DFC adopted | - |
| Ellenburger - San Saba | Minor | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Hickory | Minor | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Marble Falls | Minor | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Woodbine | Minor | 11/4/2021 | Submitted 11/1/2022, GR 21-013 MAG |
| Groundwater Management Area 12 | | | |
| Brazos Valley GCD, Post Oak Savannah GCD, Lost Pines GCD | | | |
| **Aquifer** | **Major or Minor Aquifer?** | **Desired Future Conditions Status** | **Modeled Available Groundwater Status** |
| Carrizo-Wilcox | Major | 11/30/2021 | Submitted 11/1/2022, GR 21-017 MAG |
| Brazos River Alluvium | Minor | 11/30/2021 | Submitted 11/1/2022, GR 21-017 MAG |
| Queen City | Minor | 11/30/2021 | Submitted 11/1/2022, GR 21-017 MAG |
| Sparta | Minor | 11/30/2021 | Submitted 11/1/2022, GR 21-017 MAG |
| Yegua-Jackson | Minor | 11/30/2021 | Submitted 11/1/2022, GR 21-017 MAG |
| Groundwater Management Area 14 | | | |
| Bluebonnet GCD | | | |
| **Aquifer** | **Major or Minor Aquifer?** | **Desired Future Conditions Status** | **Modeled Available Groundwater Status** |
| Gulf Coast | Major | 1/5/2022 | Submitted 9/8/2022, GR 21-019 MAG |

# Groundwater Availability

- Groundwater produced from 6 major and 11 minor aquifers, plus several “other” aquifers
- Groundwater availability in Region G is ~803,148-903,575 afy thru 2080
- Total increase of 5% to 14% but some decreases
- Groundwater is the primary supply in many areas/uses
- Comprised of “MAG” and “Non-MAG” availability
  - “MAG” = Modeled Available Groundwater
  - MAGs are determined by the TWDB based on desired future conditions (DFCs) adopted in the joint groundwater planning process (GMAs)
  - MAG = Availability
  - MAG availability cannot be adjusted except by using a “MAG Peak Factor”
  - Non-MAG availability are established by the TWDB but not based on the joint groundwater planning process *(usually because the aquifer was declared “non-relevant”)*
  - Non-MAG availability can be adjusted at the request of the RWPG

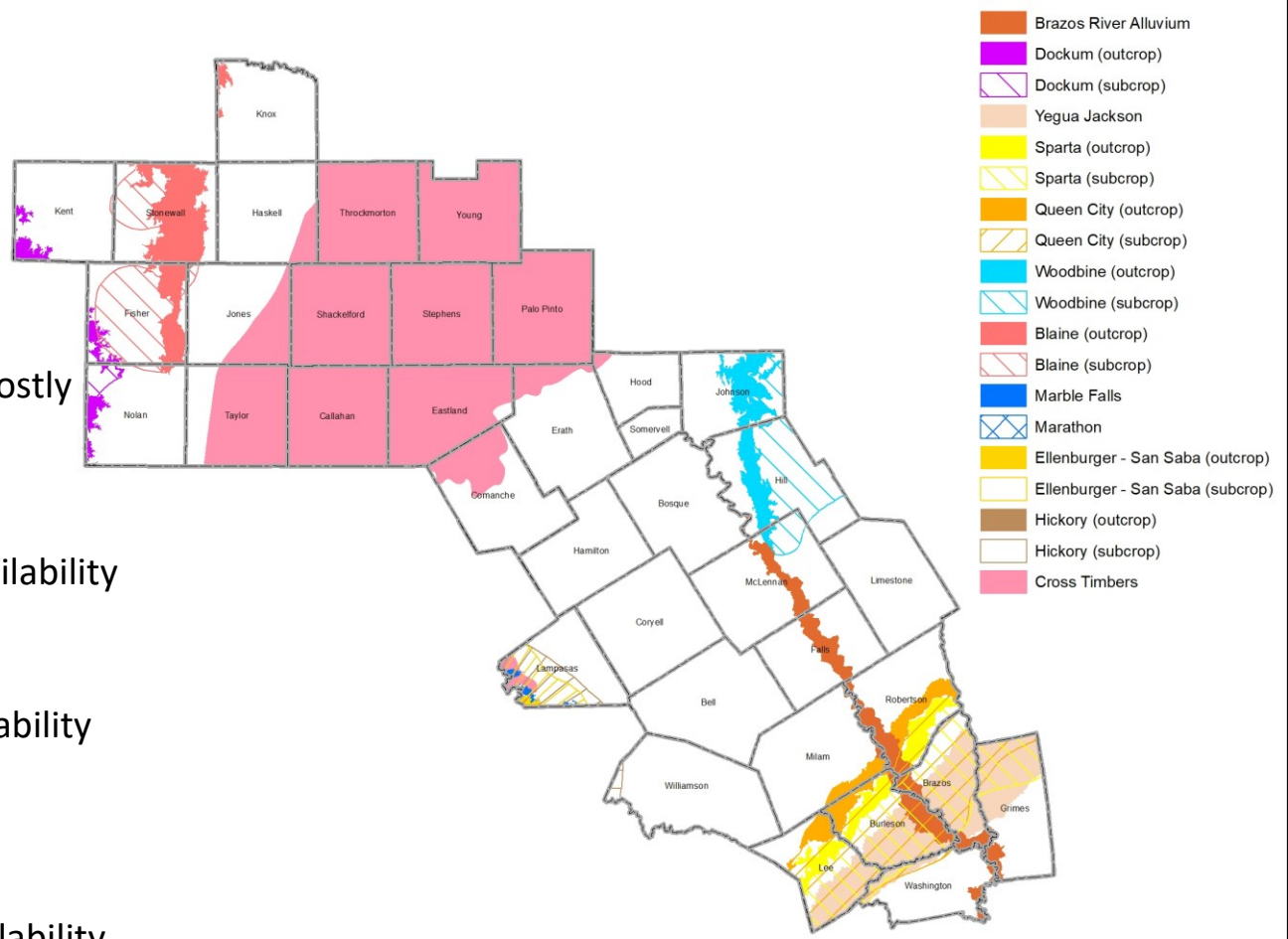
# Major Aquifers

- *Carrizo-Wilcox*
  - Main aquifer in southeastern portion of Region G
  - High availability
- *Trinity*
  - Main aquifer in middle part of Region G
  - Variable availability
- Gulf Coast
  - Only present in parts of Brazos, Grimes, and Washington counties
  - High availability
- *Seymour*
  - Northwestern part of Region G
  - Variable availability
- *Edwards-BFZ*
  - Very northern extent of the aquifer present in Williamson and Bell counties
  - Moderate availability
- *Edwards-Trinity (Plateau)*
  - Eastern extent of the aquifer present in Nolan and Taylor counties
  - Low availability



# Minor Aquifers

- Blaine- Present in northwestern Region G; variable availability
- Brazos River Alluvium- Present along Brazos River; high availability; mostly irrigation use
- *Cross Timbers*- Newly designated as a minor aquifer; present in the northcentral portion of Region G; low availability
- *Dockum*- Only present in the far western portion of Region G; low availability
- *Ellenburger-San Saba*- Present in Lampasas County only; moderate availability
- *Hickory*- Present only in Lampasas and Williamson counties; low availability
- *Marble Falls*- Present in Lampasas County only; low availability
- *Queen City*- Present in the southeastern portion of Region G; variable availability
- Sparta- Present in the southeastern portion of Region G; variable availability
- Woodbine- Present in the central portion of Region G; low availability
- Yegua-Jackson- Present in the southeastern portion of Region G; variable availability
- *"Other" Aquifers*- Aquifers not designated as a major or minor aquifer but with enough use to include in regional water planning; variable availability

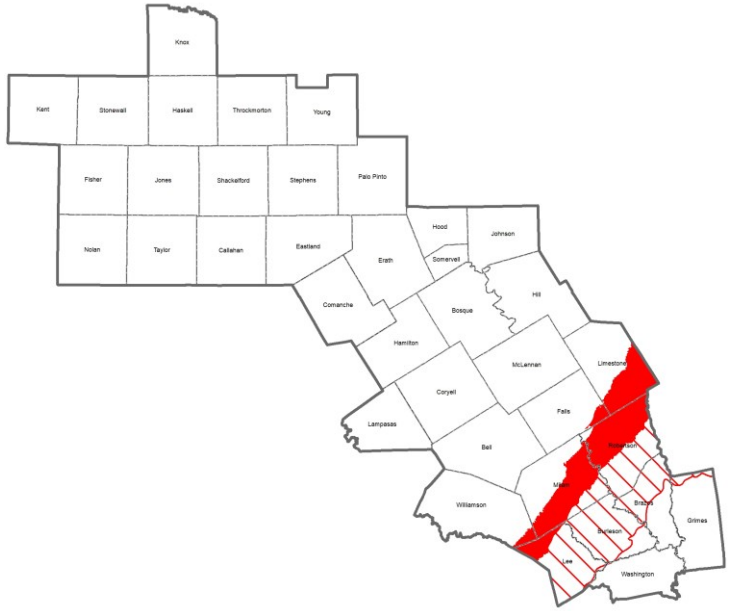


# Notes on Availability

- Aquifer availability is mostly consistent through the planning period
- If availability varies over the planning period, shown as “5,000 to 4,000”, reflecting the availability from the beginning to end of the planning period (which may increase or decrease)
- Total availability is comprised of “MAG” plus “Non-MAG” availability
  - “MAG” = Modeled Available Groundwater = Availability
  - Non-MAG availability are established by the TWDB but not necessarily based on the joint groundwater planning process
- 2022 availability for 2020 to 2070; 2027 availability for 2030 to 2080
- “NA” for 2022 availability means there was no availability during the last planning cycle

# Carrizo-Wilcox Aquifer

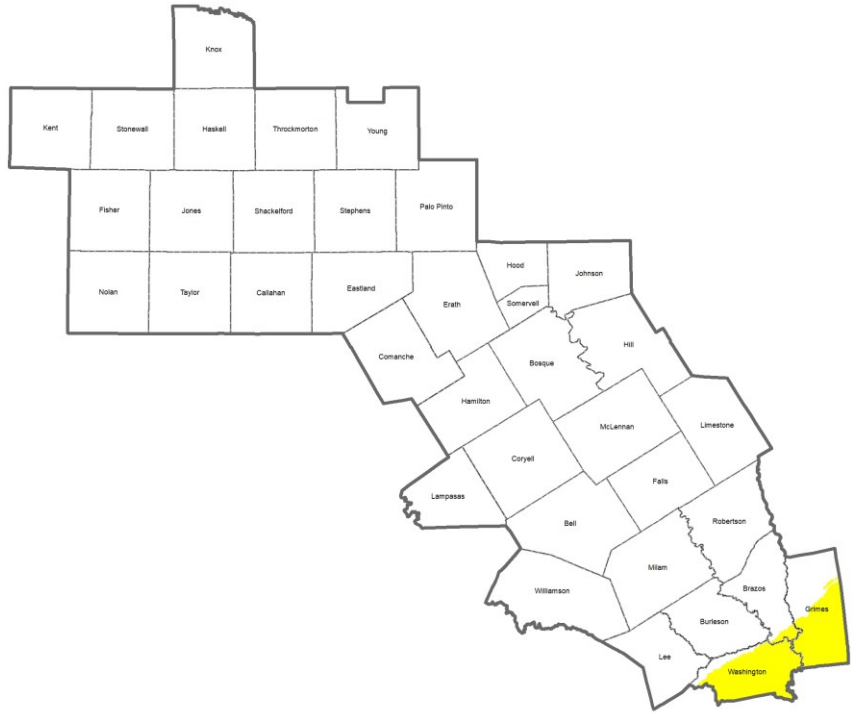
- Increased or decreased availability by county




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Carrizo-Wilcox Aquifer | Brazos | Brazos | MAG | 53,350 to 65,742 | 44,153 to 68,184 | **-11,824 to +2,442** |
| Carrizo-Wilcox Aquifer | Burleson | Brazos | MAG | 23,242 to 38,694 | 56,468 to 69,750 | 28,429 to 31,056 |
| Carrizo-Wilcox Aquifer | Falls | Brazos | MAG | 867 to 895 | 46 to 69 | **-829 to -826** |
| Carrizo-Wilcox Aquifer | Grimes | Brazos | Non-MAG | 3 | 3 | 0 |
| Carrizo-Wilcox Aquifer | Grimes | Trinity | Non-MAG | 1 | 1 | 0 |
| Carrizo-Wilcox Aquifer | Lee | Brazos | MAG | 20,462 to 17,968 | 28,498 to 34,968 | 8,768 to 17,000 |
| Carrizo-Wilcox Aquifer | Lee | Colorado | MAG | 680 to 1,101 | 785 to 1,219 | -1 to +118 |
| Carrizo-Wilcox Aquifer | Limestone | Brazos | MAG | 11,353 to 11,966 | 955 to 1,415 | **-10,528 to -10,551** |
| Carrizo-Wilcox Aquifer | Limestone | Trinity | MAG | NA | 5 to 7 | 5 to 7 |
| Carrizo-Wilcox Aquifer | Milam | Brazos | MAG | 23,928 to 22,327 | 31,300 to 35,710 | 11,089 to 13,383 |
| Carrizo-Wilcox Aquifer | Robertson | Brazos | MAG | 46,590 to 48,282 | 49,164 to 88,424 | 1,764 to 40,142 |
| Carrizo-Wilcox Aquifer | Williamson | Brazos | MAG | 9 | 139 to 206 | 130 to 197 |
| **TOTAL** | | | | **180,485 to 206,988** | **211,518 to 299,958** | **27,004 to 92,978** |

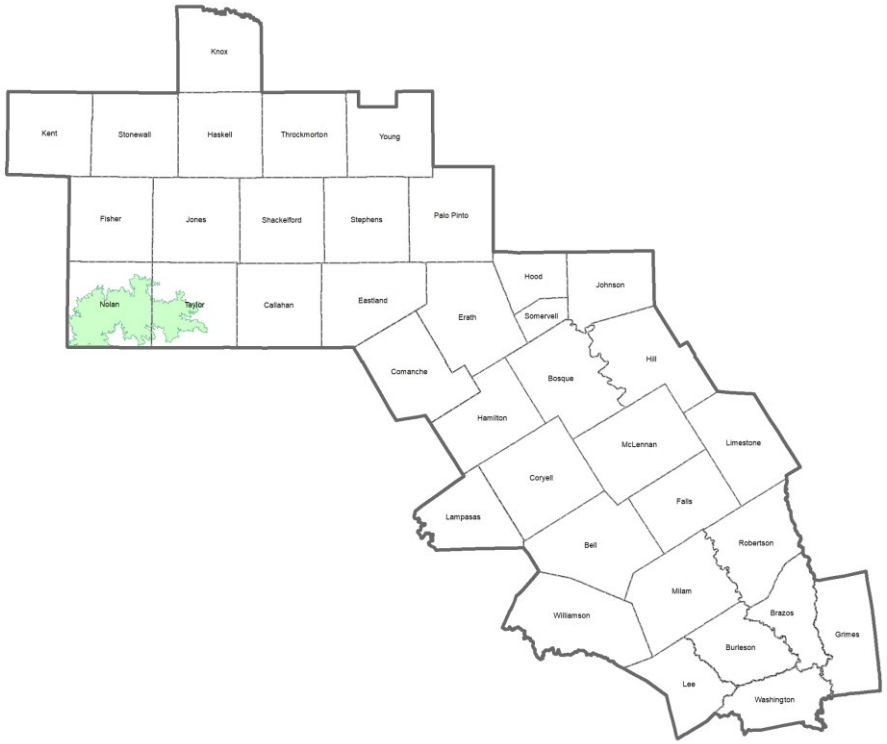
# Gulf Coast Aquifer

- Significantly increased availability




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Gulf Coast Aquifer System | Brazos | Brazos | Non-MAG | 1,189 | 1,189 | 0 |
| Gulf Coast Aquifer System | Grimes | Brazos | MAG | 10,880 | 31,117 | 20,237 |
| Gulf Coast Aquifer System | Grimes | San Jacinto | MAG | 2,194 | 19,087 | 16,893 |
| Gulf Coast Aquifer System | Grimes | Trinity | MAG | 922 | 1,283 | 361 |
| Gulf Coast Aquifer System | Washington | Brazos | MAG | 12,959 | 40,164 | 27,205 |
| Gulf Coast Aquifer System | Washington | Colorado | MAG | 72 | 233 | 161 |
| **TOTAL** | | | | **28,216** | **93,073** | **64,857** |

# Edwards-Trinity (Plateau) Aquifer

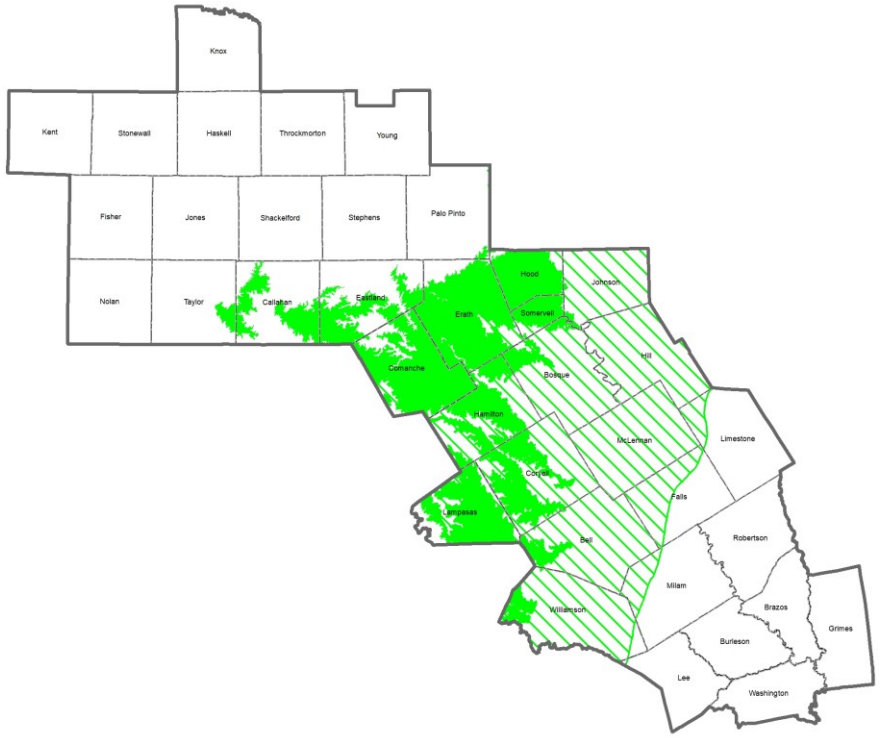



- Present in Nolan and Taylor counties
- Availability is unchanged

| Aquifer | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | Nolan | Brazos | Non-MAG | 302 | 302 | 0 |
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | Nolan | Colorado | Non-MAG | 391 | 391 | 0 |
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | Taylor | Brazos | MAG | 331 | 331 | 0 |
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | Taylor | Colorado | MAG | 158 | 158 | 0 |
| **TOTAL** | | | | **1,182** | **1,182** | **0** |

# Trinity Aquifer

- Variable changes




| Aquifer | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Trinity Aquifer | Bell | Brazos | MAG | 9,241 | 9,275 | 34 |
| Trinity Aquifer | Bosque | Brazos | MAG | 8,762 | 8,769 | 7 |
| Trinity Aquifer | Callahan | Brazos | MAG | 443 | 443 | 0 |
| Trinity Aquifer | Callahan | Colorado | MAG | 1,282 | 1,283 | 1 |
| Trinity Aquifer | Comanche | Brazos | MAG | 11,972 | 11,980 | 8 |
| Trinity Aquifer | Comanche | Colorado | MAG | 67 | 67 | 0 |
| Trinity Aquifer | Coryell | Brazos | MAG | 4,491 | 4,494 | 3 |
| Trinity Aquifer | Eastland | Brazos | MAG | 5,180 | 5,184 | 4 |
| Trinity Aquifer | Eastland | Colorado | MAG | 552 | 552 | 0 |
| Trinity Aquifer | Erath | Brazos | MAG | 20,599 | 20,607 | 8 |
| Trinity Aquifer | Falls | Brazos | MAG | 1,434 | 1,435 | 1 |
| Trinity Aquifer | Hamilton | Brazos | MAG | 2,425 | 2,427 | 2 |
| Trinity Aquifer | Hill | Brazos | MAG | 3,756 | 4,865 | 1,109 |
| Trinity Aquifer | Hill | Trinity | MAG | 261 | 287 | 26 |
| Trinity Aquifer | Hood | Brazos | MAG | 12,385 | 16,789 | 4,404 |
| Trinity Aquifer | Hood | Trinity | MAG | 39 | 50 | 11 |
| Trinity Aquifer | Johnson | Brazos | MAG | 3,888 | 3,537 | -351 |
| Trinity Aquifer | Johnson | Trinity | MAG | 5,508 | 5,288 | -220 |
| Trinity Aquifer | Lampasas | Brazos | MAG | 1,591 | 1,593 | 2 |
| Trinity Aquifer | Lampasas | Colorado | MAG | 75 | 68 | -7 |
| Trinity Aquifer | Lee | Brazos | Non-MAG | 0 | 0 | 0 |
| Trinity Aquifer | Lee | Colorado | Non-MAG | 0 | 0 | 0 |
| Trinity Aquifer | Limestone | Brazos | MAG | 0 | 0 | 0 |
| Trinity Aquifer | Limestone | Trinity | MAG | 0 | 0 | 0 |
| Trinity Aquifer | McLennan | Brazos | MAG | 20,635 | 20,649 | 14 |
| Trinity Aquifer | Milam | Brazos | MAG | 0 | 0 | 0 |
| Trinity Aquifer | Palo Pinto | Brazos | Non-MAG | 12 | 1 | -11 |
| Trinity Aquifer | Somervell | Brazos | MAG | 3,181 | 1,988 | -1,193 |
| Trinity Aquifer | Taylor | Brazos | MAG | 5 | 5 | 0 |
| Trinity Aquifer | Taylor | Colorado | MAG | 9 | 9 | 0 |
| Trinity Aquifer | Williamson | Brazos | MAG | 3,498 | 3,678 | 180 |
| Trinity Aquifer | Williamson | Colorado | MAG | 5 | 5 | 0 |
| **TOTAL** | | | | **121,296** | **125,328** | **~4,000** |

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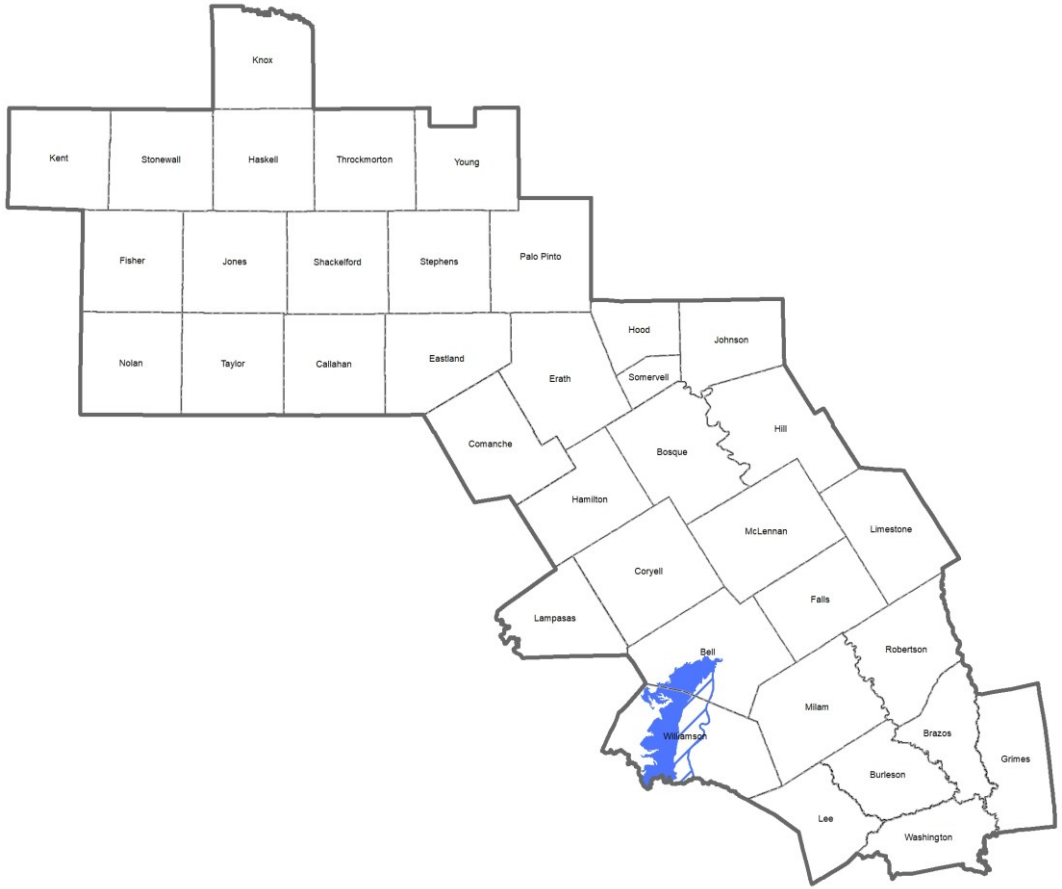
# Edwards-BFZ Aquifer

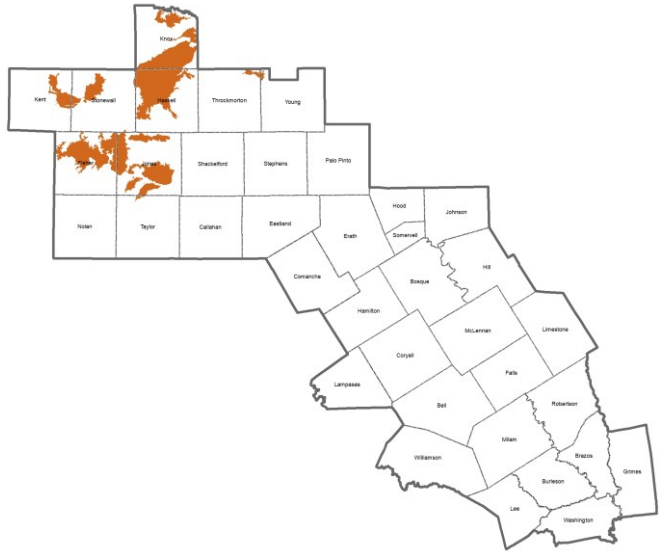
- Present in Bell and Williamson counties
- Unchanged availability




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Edwards-BFZ Aquifer | Bell | Brazos | MAG | 6,469 | 6,469 | 0 |
| Edwards-BFZ Aquifer | Williamson | Brazos | MAG | 3,351 | 3,351 | 0 |
| Edwards-BFZ Aquifer | Williamson | Colorado | MAG | 101 | 101 | 0 |
| **TOTAL** | | | | **9,921** | **9,921** | **0** |

# Seymour Aquifer

- Relatively unchanged availability *(with a couple of exceptions)*



| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Seymour Aquifer | Taylor | Brazos | Non-MAG | NA | 0 | 0 |
| Seymour Aquifer | Fisher | Brazos | MAG | 6,718 to 6,131 | 6,132 to 5,900 | ~0 |
| Seymour Aquifer | Haskell | Brazos | MAG | 41,750 to 41,636 | 41,638 to 41,752 | 2 |
| Seymour Aquifer | Jones | Brazos | Non-MAG | 2,918 | 3,552 to 3,563 | 634 to 642 |
| Seymour Aquifer | Kent | Brazos | Non-MAG | ~1,180 | 902 | **-278** |
| Seymour Aquifer | Knox | Brazos | MAG | ~25,629 | ~25,629 | 0 |
| Seymour Aquifer | Knox | Red | MAG | 3,337 to 1,344 | 1,011 to 1,108 | ~0 |
| Seymour Aquifer | Stonewall | Brazos | Non-MAG | 233 to 214 | ~254 | 24 to 39 |
| Seymour Aquifer | Throckmorton | Brazos | Non-MAG | 115 | 3 | **-112** |
| Seymour Aquifer | Young | Brazos | Non-MAG | 309 to 258 | 1 | **-257** |
| **TOTAL** | | | | **82,260 to 79,424** | **79,122 to 79,182** | **+13 to +37** |

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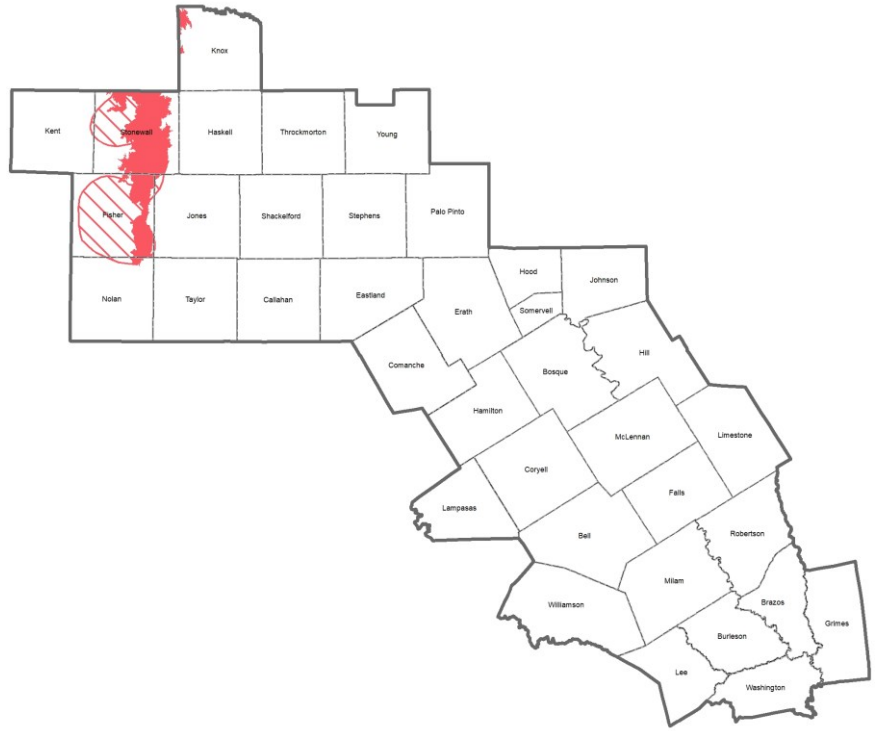
# Blaine Aquifer

- Non-MAG availability eliminated in two counties




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Blaine Aquifer | Fisher | Brazos | MAG | 12,820 | 12,820 | 0 |
| Blaine Aquifer | Jones | Brazos | Non-MAG | NA | 0 | 0 |
| Blaine Aquifer | Kent | Brazos | Non-MAG | NA | 0 | 0 |
| Blaine Aquifer | Knox | Brazos | Non-MAG | 700 | 0 | -700 |
| Blaine Aquifer | Knox | Red | Non-MAG | NA | 0 | 0 |
| Blaine Aquifer | Nolan | Brazos | Non-MAG | 100 | 100 | 0 |
| Blaine Aquifer | Stonewall | Brazos | Non-MAG | 8,700 | 0 | -8,700 |
| **TOTAL** | | | | **22,320** | **12,920** | **-9,400** |

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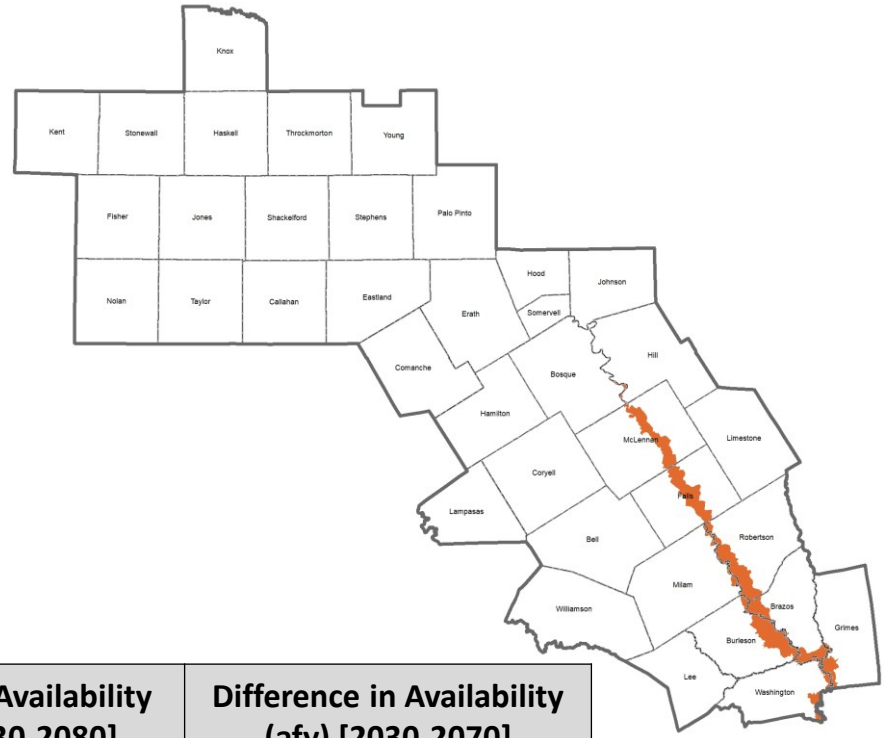
# Brazos River Alluvium Aquifer

- High availability, mostly for irrigation
- Mostly lower availability than last cycle




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Brazos River Alluvium Aquifer | Bosque | Brazos | Non-MAG | 830 | 830 | 0 |
| Brazos River Alluvium Aquifer | Brazos | Brazos | MAG | 81,581 to 79,872 | 76,978 to 76,039 | **-3,333 to -3,833** |
| Brazos River Alluvium Aquifer | Burleson | Brazos | MAG | 28,472 to 28,413 | 32,207 | 3,789 to 3,793 |
| Brazos River Alluvium Aquifer | Falls | Brazos | Non-MAG | 16,684 | 0 | **-16,684** |
| Brazos River Alluvium Aquifer | Grimes | Brazos | Non-MAG | 5,112 | 5,112 | 0 |
| Brazos River Alluvium Aquifer | Hill | Brazos | Non-MAG | 632 | 632 | 0 |
| Brazos River Alluvium Aquifer | McLennan | Brazos | Non-MAG | 15,023 | 15,023 | 0 |
| Brazos River Alluvium Aquifer | Milam | Brazos | Partial MAG | 47,818 to 47,771 | 31,375 to 31,358 | **-16,410 to -16,413** |
| Brazos River Alluvium Aquifer | Robertson | Brazos | MAG | 61,161 to 57,480 | 55,424 to 54,618 | **-2,535 to -2,862** |
| Brazos River Alluvium Aquifer | Washington | Brazos | Non-MAG | 5,770 | 5,770 | 0 |
| **TOTAL** | | | | **263,083 to 257,587** | **223,351 to 221,588** | **-35,173 to -35,999** |

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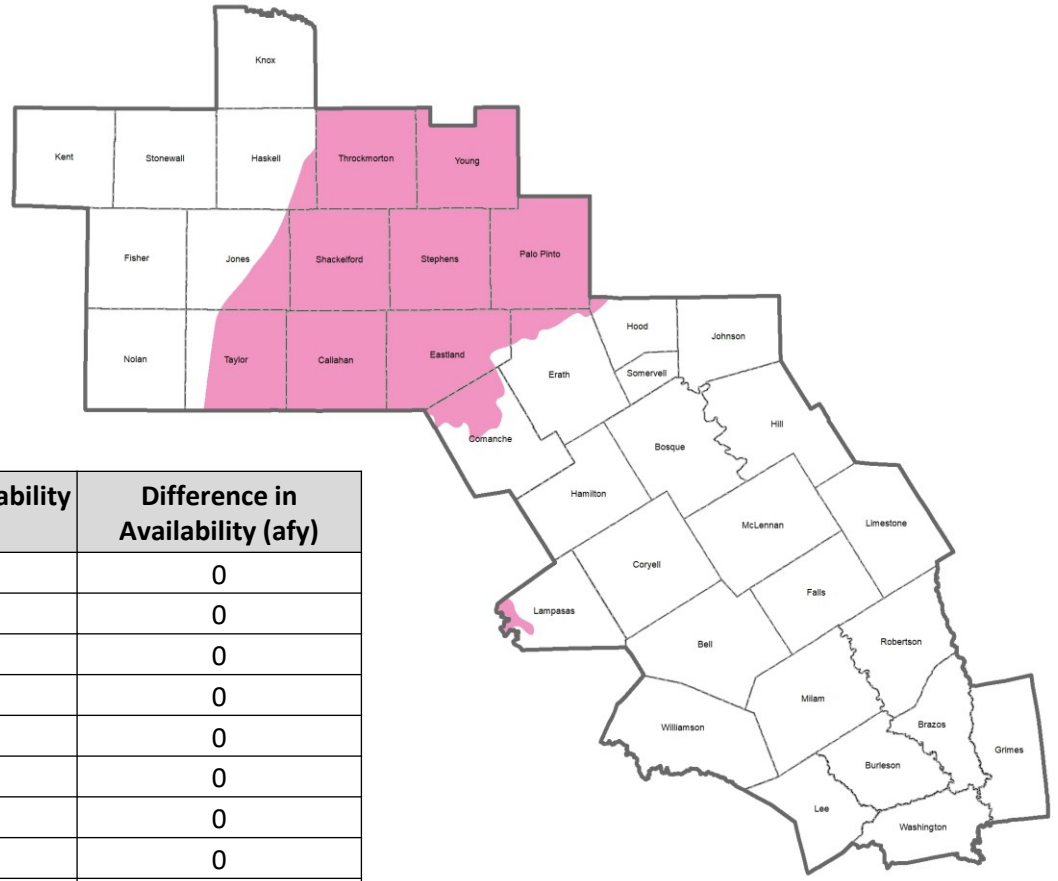
# Cross Timbers Aquifer

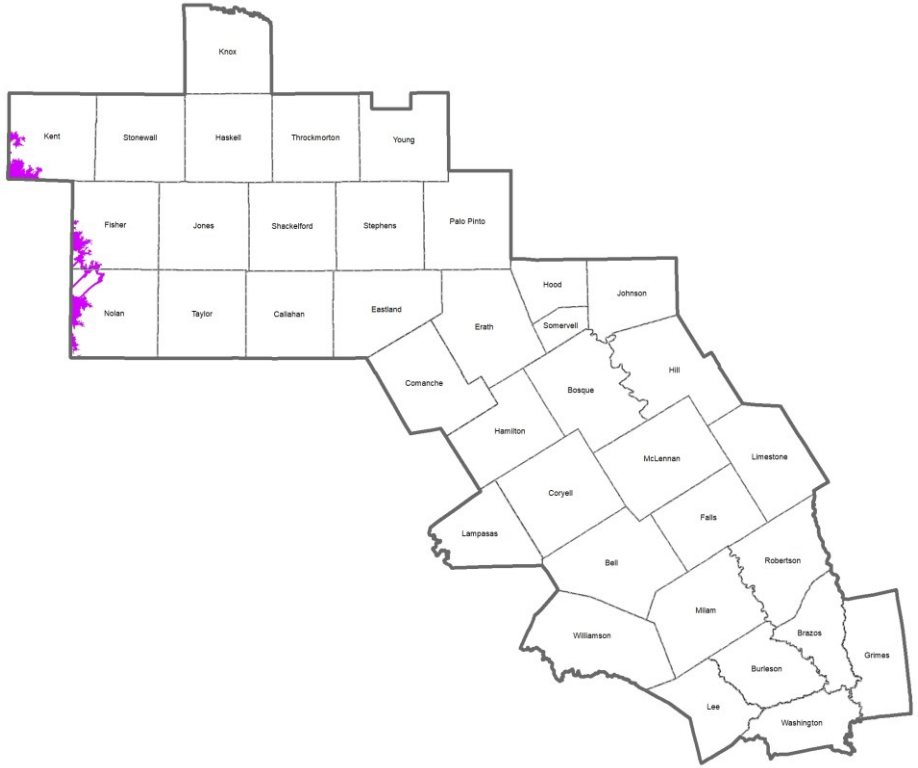
- All Non-MAG status
- Availability is unchanged




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Cross Timbers Aquifer | Callahan | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Callahan | Colorado | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Comanche | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Eastland | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Eastland | Colorado | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Erath | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Haskell | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Hood | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Jones | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Lampasas | Colorado | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Palo Pinto | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Shackelford | Brazos | Non-MAG | 712 | 712 | 0 |
| Cross Timbers Aquifer | Stephens | Brazos | Non-MAG | 620 | 620 | 0 |
| Cross Timbers Aquifer | Throckmorton | Brazos | Non-MAG | 364 | 364 | 0 |
| Cross Timbers Aquifer | Young | Brazos | Non-MAG | 799 | 799 | 0 |
| Cross Timbers Aquifer | Young | Trinity | Non-MAG | 219 | 219 | 0 |
| Cross Timbers Aquifer | Taylor | Brazos | Non-MAG | NA | 0 | 0 |
| Cross Timbers Aquifer | Taylor | Colorado | Non-MAG | NA | 0 | 0 |
| **TOTAL** | | | | **2,714** | **2,714** | **0** |

# Dockum Aquifer

- Decreased availability
- 2027 availability decreases over time




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Dockum Aquifer | Fisher | Brazos | MAG | 79 | 79 | 0 |
| Dockum Aquifer | Kent | Brazos | Non-MAG | 6,250 | 29 | **-6,221** |
| Dockum Aquifer | Nolan | Brazos | Non-MAG | 2,824 | 849 to 550 | **-1,975 to -2,274** |
| Dockum Aquifer | Nolan | Colorado | Non-MAG | 2,926 | 3,166 to 1,995 | **+240 to -931** |
| **TOTAL** | | | | **12,079** | **4,123 to 2,653** | **-7,956 to -9,426** |

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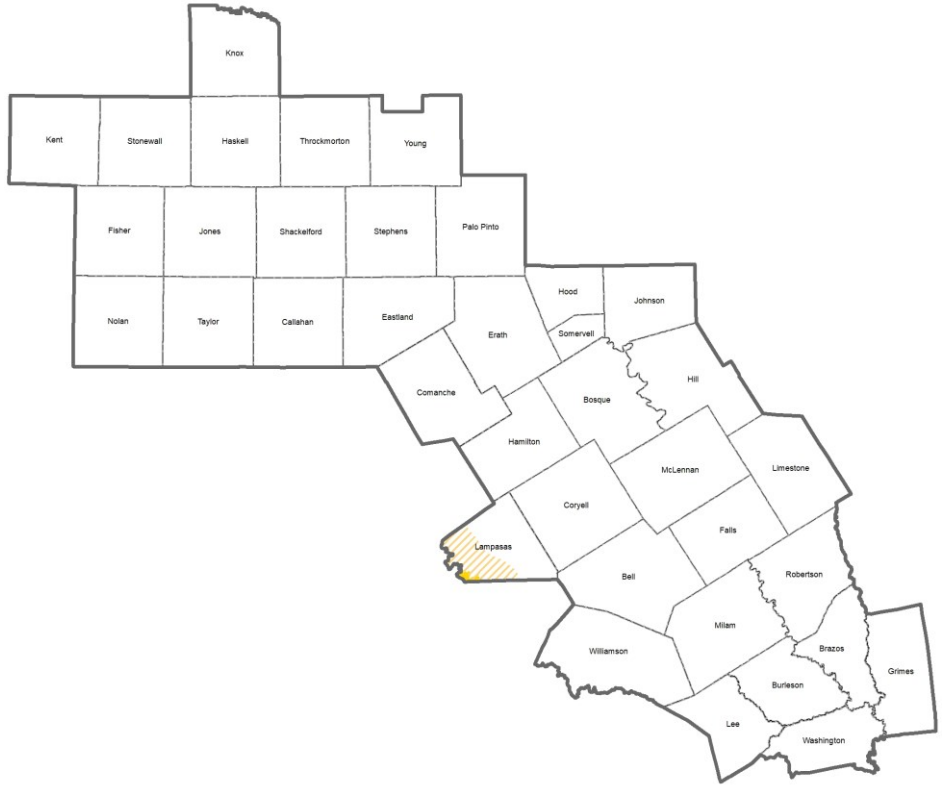
# Ellenburger-San Saba Aquifer

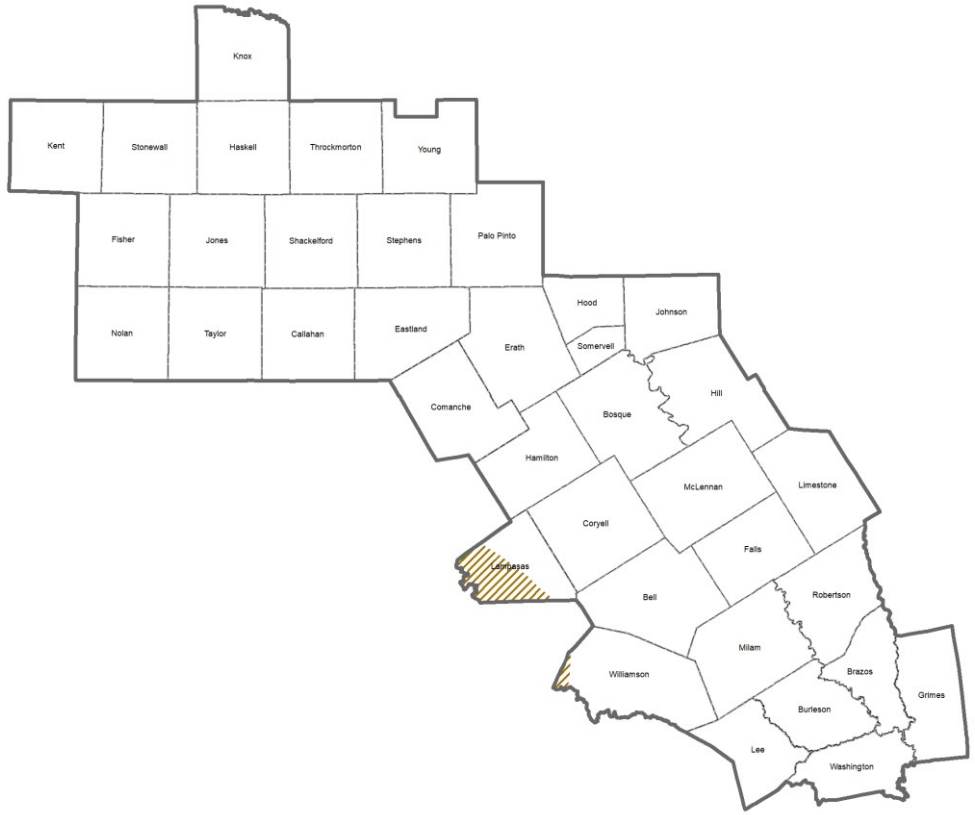
- Present in western Lampasas County
- Relatively unchanged availability




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Ellenburger-San Saba Aquifer | Lampasas | Brazos | MAG | 1,680 | 1,681 | 1 |
| Ellenburger-San Saba Aquifer | Lampasas | Colorado | MAG | 913 | 914 | 1 |
| **TOTAL** | | | | **2,593** | **2,595** | **2** |

# Hickory Aquifer

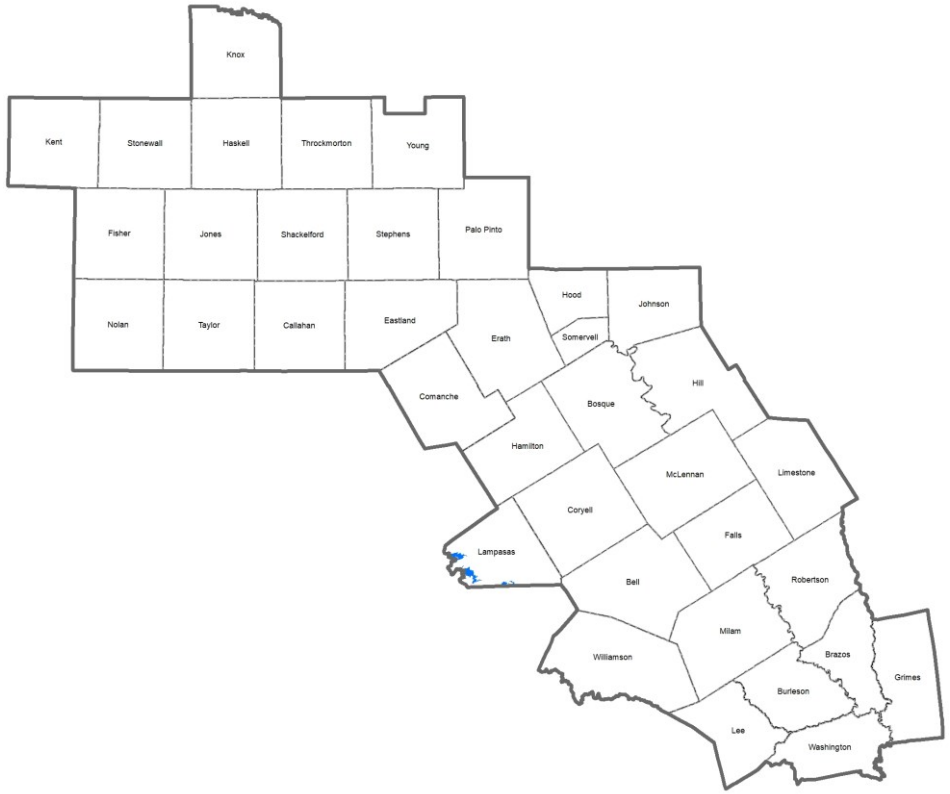
- Present in western Lampasas and Williamson counties
- Availability is unchanged




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Hickory Aquifer | Lampasas | Brazos | MAG | 79 | 79 | 0 |
| Hickory Aquifer | Lampasas | Colorado | MAG | 34 | 34 | 0 |
| Hickory Aquifer | Williamson | Brazos | Non-MAG | NA | 0 | 0 |
| Hickory Aquifer | Williamson | Colorado | Non-MAG | 0 | 0 | 0 |
| **TOTAL** | | | | **113** | **113** | **0** |

# Marble Falls Aquifer

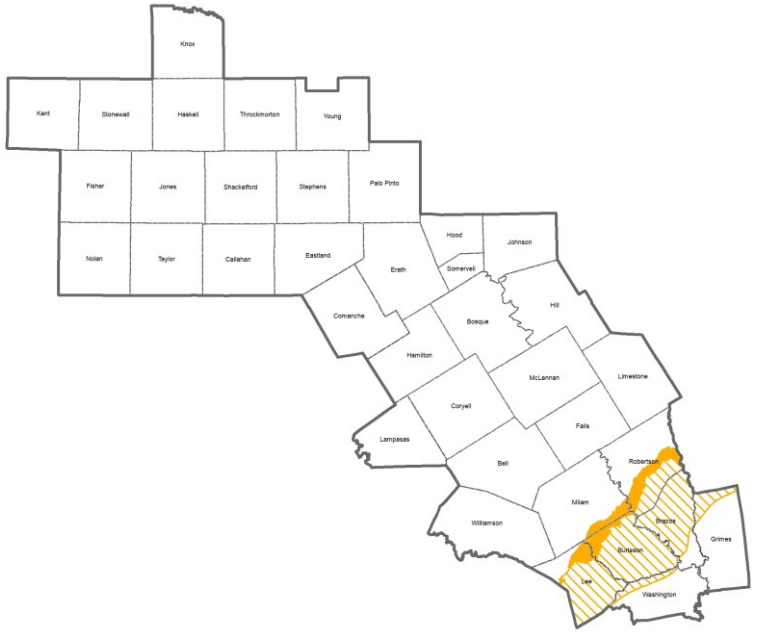
- Present in western Lampasas County
- Very small change




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Marble Falls Aquifer | Lampasas | Brazos | MAG | 1,952 | 1,954 | 2 |
| Marble Falls Aquifer | Lampasas | Colorado | MAG | 885 | 885 | 0 |
| **TOTAL** | | | | **2,837** | **2,839** | **2** |

# Queen City Aquifer

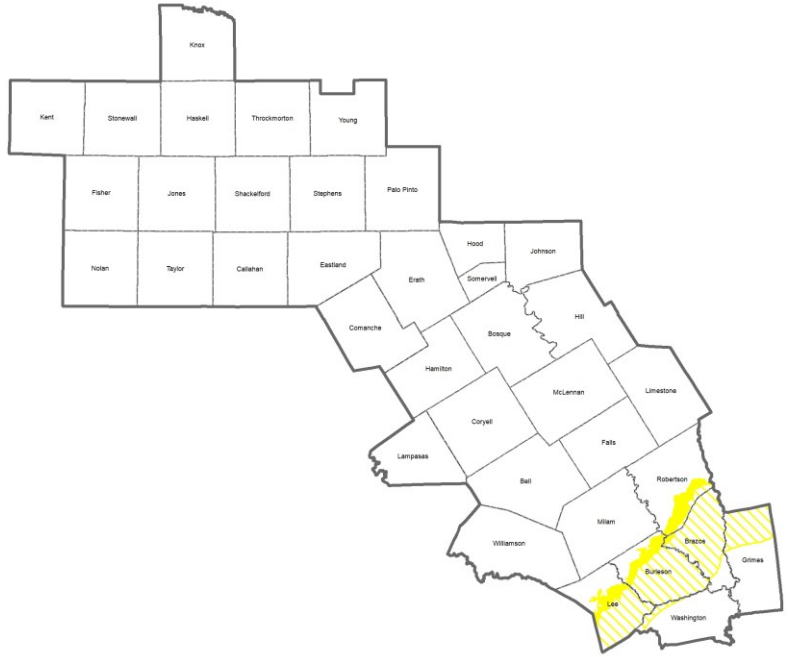
- Changes in availability are variable




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Queen City Aquifer | Brazos | Brazos | MAG | 836 to 891 | 245 to 694 | **-638 to -197** |
| Queen City Aquifer | Burleson | Brazos | MAG | 416 to 447 | 3,090 to 4,863 | 2,643 to 4,416 |
| Queen City Aquifer | Grimes | Brazos | Non-MAG | 0 | 0 | 0 |
| Queen City Aquifer | Grimes | Trinity | Non-MAG | 0 | 0 | 0 |
| Queen City Aquifer | Lee | Brazos | MAG | 713 to 727 | 601 to 854 | **-112 to +127** |
| Queen City Aquifer | Lee | Colorado | MAG | 48 to 102 | 99 to 146 | 38 to 44 |
| Queen City Aquifer | Milam | Brazos | MAG | 53 to 56 | 1,348 to 2,976 | 1,292 to 2,920 |
| Queen City Aquifer | Robertson | Brazos | MAG | 368 to 309 | 144 to 575 | **-165 to +266** |
| Queen City Aquifer | Washington | Brazos | Non-MAG | NA | 0 | 0 |
| **TOTAL** | | | | **2,430 to 2,532** | **5,527 to 10,108** | **3,058 to 7,576** |

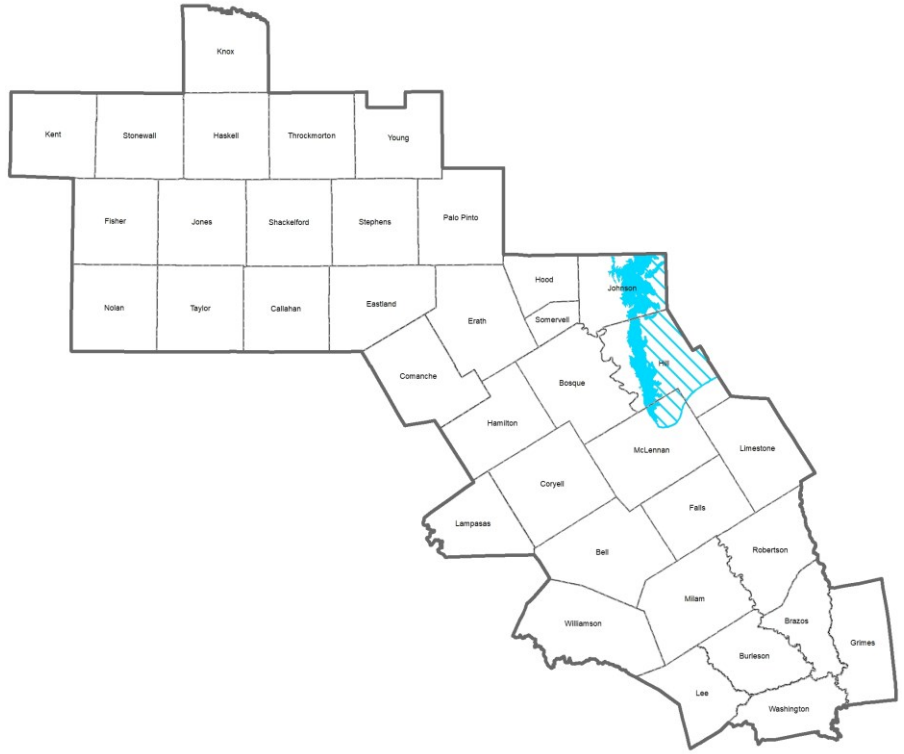
# Sparta Aquifer

- Changes in availability are variable




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Sparta Aquifer | Brazos | Brazos | MAG | 6,505 to 8,509 | 6,014 to 12,138 | **-491 to +3,629** |
| Sparta Aquifer | Burleson | Brazos | MAG | 4,042 to 6,735 | 2,840 to 4,105 | **-1,202 to -2,630** |
| Sparta Aquifer | Grimes | Brazos | Non-MAG | 0 | 0 | 0 |
| Sparta Aquifer | Grimes | San Jacinto | Non-MAG | 0 | 0 | 0 |
| Sparta Aquifer | Grimes | Trinity | Non-MAG | 0 | 0 | 0 |
| Sparta Aquifer | Lee | Brazos | MAG | 1,274 to 1,256 | 694 to 1,472 | **-580 to +216** |
| Sparta Aquifer | Lee | Colorado | MAG | 213 to 238 | 115 to 279 | **-98 to +41** |
| Sparta Aquifer | Robertson | Brazos | MAG | 510 | 338 to 1,022 | **-172 to +512** |
| Sparta Aquifer | Washington | Brazos | Non-MAG | NA | 0 | 0 |
| **TOTAL** | | | | **9,643 to 17,248** | **10,001 to 19,016** | **-2,543 to +1,768** |

# Woodbine Aquifer




- Relatively unchanged availability

| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Woodbine Aquifer | Hill | Brazos | MAG | 284 | 284 | 0 |
| Woodbine Aquifer | Hill | Trinity | MAG | 302 | 302 | 0 |
| Woodbine Aquifer | Johnson | Brazos | MAG | 24 | 24 | 0 |
| Woodbine Aquifer | Johnson | Trinity | MAG | 1,956 | 1,957 | 1 |
| Woodbine Aquifer | McLennan | Brazos | MAG | 0 | 0 | 0 |
| **TOTAL** | | | | **2,566** | **2,567** | **1** |

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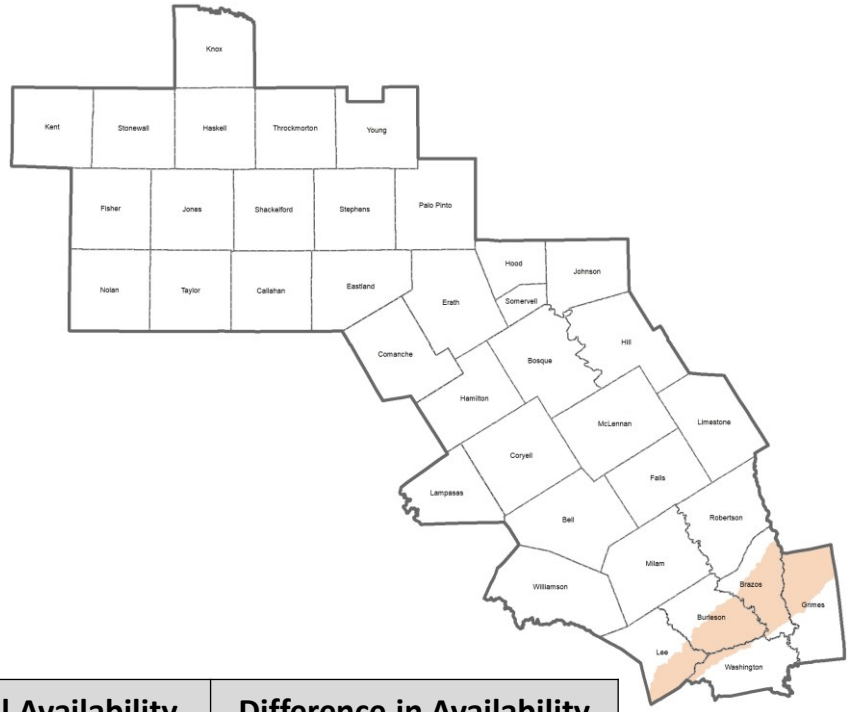
# Yegua-Jackson Aquifer

- Significantly lower availability in Burleson County




| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Yegua-Jackson Aquifer | Brazos | Brazos | MAG | ~6,854 | 6,270 to 7,091 | **-584 to +237** |
| Yegua-Jackson Aquifer | Burleson | Brazos | MAG | 14,544 to 12,326 | 5,315 to 6,058 | **-7,261 to -6,268** |
| Yegua-Jackson Aquifer | Grimes | Brazos | Non-MAG | 479 | 479 | 0 |
| Yegua-Jackson Aquifer | Grimes | San Jacinto | Non-MAG | 0 | 0 | 0 |
| Yegua-Jackson Aquifer | Grimes | Trinity | Non-MAG | 308 | 308 | 0 |
| Yegua-Jackson Aquifer | Lee | Brazos | Non-MAG | 157 | 278 | 121 |
| Yegua-Jackson Aquifer | Lee | Colorado | Non-MAG | 216 | 384 | 168 |
| Yegua-Jackson Aquifer | Washington | Brazos | Non-MAG | 0 | 0 | 0 |
| Yegua-Jackson Aquifer | Washington | Colorado | Non-MAG | 157 | 157 | 0 |
| **TOTAL** | | | | **22,717 to 20,497** | **13,191 to 14,755** | **-7,556 to -5,742** |

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# Other Aquifers

- Not official aquifers per TWDB
- No changes is availability

| Aquifer Name | County | Basin | Type | 2022 Total Availability (afy) | 2027 Total Availability (afy) | Difference in Availability (afy) |
|---|---|---|---|---|---|---|
| Navasota River Alluvium Aquifer | Grimes | Brazos | Non-MAG | 2,216 | 2,216 | 0 |
| Other Aquifer | Shackelford | Brazos | Non-MAG | 97 | 97 | 0 |
| Other Aquifer | Stephens | Brazos | Non-MAG | 85 | 85 | 0 |
| Other Aquifer | Williamson | Brazos | Non-MAG | 665 | 665 | 0 |
| **TOTAL** | | | | **3,063** | **3,063** | **0** |

# Groundwater Availability (by decade)

| Aquifer | Total Availability 2030 | Total Availability 2040 | Total Availability 2050 | Total Availability 2060 | Total Availability 2070 | Total Availability 2080 |
|---|---|---|---|---|---|---|
| **MAJOR AQUIFERS** | | | | | | |
| Carrizo-Wilcox Aquifer | 211,518 | 239,239 | 261,735 | 280,855 | 299,966 | 299,958 |
| Edwards-BFZ Aquifer | 9,921 | 9,921 | 9,921 | 9,921 | 9,921 | 9,921 |
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | 1,182 | 1,182 | 1,182 | 1,182 | 1,182 | 1,182 |
| Gulf Coast Aquifer System | 93,073 | 93,073 | 93,073 | 93,073 | 93,073 | 93,073 |
| Seymour Aquifer | 79,122 | 78,820 | 79,353 | 82,099 | 79,461 | 79,182 |
| Trinity Aquifer | 125,328 | 125,328 | 125,328 | 125,328 | 125,328 | 125,328 |
| ***Major Aquifer Total*** | ***520,144*** | ***547,563*** | ***570,592*** | ***592,458*** | ***608,931*** | ***608,644*** |
| **MINOR AND OTHER AQUIFERS** | | | | | | |
| Blaine Aquifer | 12,920 | 12,920 | 12,920 | 12,920 | 12,920 | 12,920 |
| Brazos River Alluvium Aquifer | 223,351 | 222,490 | 221,969 | 221,755 | 221,588 | 221,588 |
| Cross Timbers Aquifer | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 |
| Dockum Aquifer | 4,123 | 3,440 | 3,056 | 2,814 | 2,653 | 2,653 |
| Ellenburger-San Saba Aquifer | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 | 2,595 |
| Hickory Aquifer | 113 | 113 | 113 | 113 | 113 | 113 |
| Marble Falls Aquifer | 2,839 | 2,839 | 2,839 | 2,839 | 2,839 | 2,839 |
| Navasota River Alluvium Aquifer | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 |
| Other Aquifer | 847 | 847 | 847 | 847 | 847 | 847 |
| Queen City Aquifer | 5,527 | 6,486 | 7,553 | 8,751 | 10,108 | 10,108 |
| Sparta Aquifer | 10,001 | 12,160 | 14,374 | 16,652 | 19,016 | 19,016 |
| Woodbine Aquifer | 2,567 | 2,567 | 2,567 | 2,567 | 2,567 | 2,567 |
| Yegua-Jackson Aquifer | 13,191 | 15,702 | 15,701 | 15,697 | 14,755 | 14,755 |
| ***Minor Aquifer Total*** | ***283,004*** | ***287,089*** | ***289,464*** | ***292,480*** | ***294,931*** | ***294,931*** |
| **TOTAL** | **803,148** | **834,652** | **860,056** | **884,938** | **903,862** | **903,575** |
| ***Total in Last Planning Cycle*** | ***766,807*** | ***776,348*** | ***790,548*** | ***796,312*** | ***793,176*** | ***NA*** |

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# Changes in Groundwater Availability (by decade)

| Aquifer | Total Availability 2030 | Total Availability 2040 | Total Availability 2050 | Total Availability 2060 | Total Availability 2070 |
|---|---|---|---|---|---|
| **MAJOR AQUIFERS** | | | | | |
| Carrizo-Wilcox Aquifer | 27,004 | 47,307 | 57,579 | 73,859 | 92,978 |
| Edwards-BFZ Aquifer | 0 | 0 | 0 | 0 | 0 |
| Edwards-Trinity-Plateau, Pecos Valley, and Trinity Aquifers | 0 | 0 | 0 | 0 | 0 |
| Gulf Coast Aquifer System | 64,857 | 64,857 | 64,857 | 64,857 | 64,857 |
| Seymour Aquifer | 13 | 2 | 30 | 9 | 37 |
| Trinity Aquifer | 4,032 | 3,696 | 4,032 | 3,696 | 4,032 |
| ***Major Aquifer Total*** | ***95,906*** | ***115,862*** | ***126,498*** | ***142,421*** | ***161,904*** |
| **MINOR AND OTHER AQUIFERS** | | | | | |
| Blaine Aquifer | -9,400 | -9,435 | -9,400 | -9,435 | -9,400 |
| Brazos River Alluvium Aquifer | -35,173 | -35,468 | -35,791 | -35,899 | -35,999 |
| Cross Timbers Aquifer | 0 | 0 | 0 | 0 | 0 |
| Dockum Aquifer | -7,956 | -8,639 | -9,023 | -9,265 | -9,426 |
| Ellenburger-San Saba Aquifer | 2 | -6 | 2 | -6 | 2 |
| Hickory Aquifer | 0 | -1 | 0 | -1 | 0 |
| Marble Falls Aquifer | 2 | -6 | 2 | -6 | 2 |
| Navasota River Alluvium Aquifer | 0 | 0 | 0 | 0 | 0 |
| Other Aquifer | 0 | 0 | 0 | 0 | 0 |
| Queen City Aquifer | 3,058 | 3,996 | 5,040 | 6,219 | 7,576 |
| Sparta Aquifer | -2,543 | -2,960 | -2,873 | -596 | 1,768 |
| Woodbine Aquifer | 1 | -6 | 1 | -6 | 1 |
| Yegua-Jackson Aquifer | -7,556 | -5,033 | -4,948 | -4,800 | -5,742 |
| ***Minor Aquifer Total*** | ***-59,565*** | ***-57,558*** | ***-56,990*** | ***-53,795*** | ***-51,218*** |
| **TOTAL** | **36,341** | **58,304** | **69,508** | **88,626** | **110,686** |

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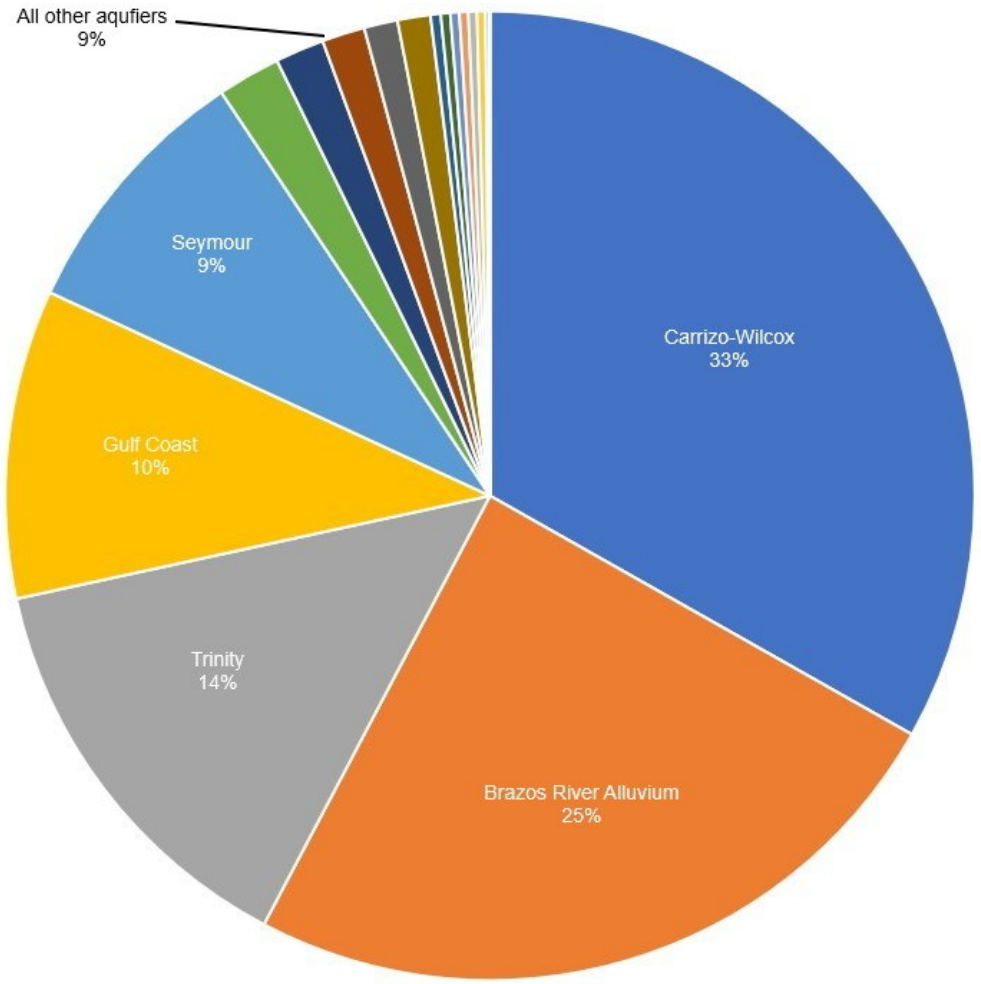
# Summary of 2080 Groundwater Availability

| Aquifer | Total Availability in 2080 (afy) |
|---|---|
| **MAJOR AQUIFERS** | |
| Carrizo-Wilcox | 299,958 |
| Edwards-BFZ | 9,921 |
| Edwards-Trinity (Plateau) | 1,182 |
| Gulf Coast System | 93,073 |
| Seymour | 79,182 |
| Trinity | 125,328 |
| ***Total Major Aquifer Availability*** | ***608,644*** |
| | |
| **MINOR AQUIFERS** | |
| Blaine | 12,920 |
| Brazos River Alluvium | 221,588 |
| Cross Timbers | 2,714 |
| Dockum | 2,653 |
| Ellenburger-San Saba | 2,595 |
| Hickory | 113 |
| Marble Falls | 2,839 |
| Other Aquifers | 3,063 |
| Queen City | 10,108 |
| Sparta | 19,016 |
| Woodbine | 2,567 |
| Yegua-Jackson | 14,755 |
| ***Total Minor Aquifer Availability*** | ***294,931*** |
| | |
| **TOTAL GROUNDWATER AVAILABILITY** | **903,575** |

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# Groundwater Availability Decreases

- Availabilities (MAG or non-MAG) have decreased in at least one county in nine aquifers:
  - Brazos River Alluvium
  - Blaine
  - Carrizo-Wilcox
  - Dockum
  - Queen City
  - Seymour
  - Sparta
  - Trinity
  - Yegua-Jackson

# Groundwater Availability Issues

- Our Process
  1. Reviewed availabilities and estimated historic pumping as a first-level screen
  2. Reviewed assigned supplies and water management strategies (WMS) from last planning cycle
- For MAGs - we focused on decreases
- For non-MAG – we reviewed all groundwater availability in case there is a need to request a change from TWDB

# Decrease in MAG Availabilities

| Aquifer Name | County | Basin | 2030 | | | | 2070 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 MAG Availability | 2027 MAG Availability | MAG Availability Difference | Percent Change MAG Availability | 2022 MAG Availability | 2027 MAG Availability | MAG Availability Difference | Percent Change MAG Availability |
| Brazos River Alluvium Aquifer | Brazos | Brazos | 80,311 | 76,978 | (3,333) | -4.15% | 79,872 | 76,039 | (3,833) | -4.80% |
| Brazos River Alluvium Aquifer | Milam | Brazos | 47,785 | 31,375 | (16,410) | -34.34% | 47,771 | 31,358 | (16,413) | -34.36% |
| Brazos River Alluvium Aquifer | Robertson | Brazos | 57,959 | 55,424 | (2,535) | -4.37% | 57,480 | 54,618 | (2,862) | -4.98% |
| | | | | | | | | | | |
| Carrizo-Wilcox Aquifer | Brazos | Brazos | 55,977 | 44,153 | (11,824) | -21.12% | 65,742 | 68,184 | 2,442 | 3.71% |
| Carrizo-Wilcox Aquifer | Falls | Brazos | 875 | 46 | (829) | -94.74% | 895 | 69 | (826) | -92.29% |
| Carrizo-Wilcox Aquifer | Lee | Colorado | 786 | 785 | (1) | -0.13% | 1,101 | 1,219 | 118 | 10.72% |
| Carrizo-Wilcox Aquifer | Limestone | Brazos | 11,483 | 955 | (10,528) | -91.68% | 11,966 | 1,415 | (10,551) | -88.17% |
| | | | | | | | | | | |
| Queen City Aquifer | Brazos | Brazos | 883 | 245 | (638) | -72.25% | 891 | 694 | (197) | -22.11% |
| Queen City Aquifer | Lee | Brazos | 713 | 601 | (112) | -15.71% | 727 | 854 | 127 | 17.47% |
| Queen City Aquifer | Robertson | Brazos | 309 | 144 | (165) | -53.40% | 309 | 575 | 266 | 86.08% |
| | | | | | | | | | | |
| Sparta Aquifer | Brazos | Brazos | 6,505 | 6,014 | (491) | -7.55% | 8,509 | 12,138 | 3,629 | 42.65% |
| Sparta Aquifer | Burleson | Brazos | 4,042 | 2,840 | (1,202) | -29.74% | 6,735 | 4,105 | (2,630) | -39.05% |
| Sparta Aquifer | Lee | Brazos | 1,274 | 694 | (580) | -45.53% | 1,256 | 1,472 | 216 | 17.20% |
| Sparta Aquifer | Lee | Colorado | 213 | 115 | (98) | -46.01% | 238 | 279 | 41 | 17.23% |
| Sparta Aquifer | Robertson | Brazos | 510 | 338 | (172) | -33.73% | 510 | 1,022 | 512 | 100.39% |
| | | | | | | | | | | |
| Trinity Aquifer | Johnson | Brazos | 3,888 | 3,537 | (351) | -9.03% | 3,888 | 3,537 | (351) | -9.03% |
| Trinity Aquifer | Johnson | Trinity | 5,508 | 5,288 | (220) | -3.99% | 5,508 | 5,288 | (220) | -3.99% |
| Trinity Aquifer | Lampasas | Colorado | 75 | 68 | (7) | -9.33% | 75 | 68 | (7) | -9.33% |
| Trinity Aquifer | Somervell | Brazos | 3,181 | 1,988 | (1,193) | -37.50% | 3,181 | 1,988 | (1,193) | -37.50% |
| | | | | | | | | | | |
| Yegua-Jackson Aquifer | Brazos | Brazos | 6,854 | 6,270 | (584) | -8.52% | 6,854 | 7,091 | 237 | 3.46% |
| Yegua-Jackson Aquifer | Burleson | Brazos | 12,576 | 5,315 | (7,261) | -57.74% | 12,326 | 6,058 | (6,268) | -50.85% |

# MAG Availability Decreases

- Brazos River Alluvium- Almost all of the use is for irrigation; no WMS
- Carrizo-Wilcox
  - Significant decrease in Limestone County
  - Brazos County decreased up to 11,824 afy due to MAG Peak Factor used in last planning cycle plus an adjustment in pumping by GMA 12; ~7,500 to 17,000 afy in WMS (Bryan and College Station)
- Queen City- Low municipal use, historic use slightly higher than MAG; no WMS
- Sparta- Most counties MAG much higher than historic use
  - Burleson County- MAG decreased to 2,840 to 4,105 afy; 2 WMS for 2,162 to 4,903 afy (almost all for City of Round Rock)
- Trinity- Most counties with decreases have a MAG much higher than historic use
  - Somervell County- MAG decreased to 1,988 afy; WMS for 426 afy; 2,755 afy of assigned supply
- Yegua-Jackson- Both counties with decreases have MAG much higher than historic use
  - Burleson County- MAG decreased to 5,315 to 6,058 afy; WMS for 588 to 5,983 afy (most for Cities of Hutto and Round Rock)

# Limestone County

- MAG availability in Limestone County significantly reduced by GMA 12 *(Falls County also significantly reduced but impact is smaller)*

| County | Aquifer | Basin | Type | 2022 Total Availability (afy) [2020-2070] | 2027 Total Availability (afy) [2030-2080] | Difference in Availability (afy) [2030-2070] |
|---|---|---|---|---|---|---|
| Falls | Carrizo-Wilcox Aquifer | Brazos | MAG | 867 to 895 | 46 to 69 | **-829 to -826** |
| Limestone | Carrizo-Wilcox Aquifer | Brazos | MAG | 11,353 to 11,966 | 955 to 1,415 | **-10,528 to -10,551** |

- ~4,000 ac-ft currently used, about half for public supply (Bistone Municipal WSD, Cedar Creek Water Supply, Big Creek West Water Co., Point Enterprise WSC, White Rock Water SUD, Cities of Kosse, Mexia, and Tehuacana)
- 6,459 afy assigned supply in last planning cycle
- 4 WMS in last planning cycle, totaling 980 to 1,430 afy
- Limestone County does not have a GCD
- Options:
  - Potentially use a large MAG Peak Factor (~6x) to boost MAG availability
  - coordinate with GMA 12 to ensure sufficient pumping is included for the next round of joint groundwater planning
  - other

# Potential Solutions to MAG Declines

- MAG Peak Factor- used for Carrizo-Wilcox Aquifer in Brazos County in the last planning cycle.
- Limestone County is a unique issue

# Decrease in Non-MAG Availabilities

| Aquifer Name | County | Basin | 2030 | | | | 2070 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 Non-MAG Availability | 2027 Non-MAG Availability | Non-MAG Availability Difference | Percent Change Non-MAG Availability | 2022 Non-MAG Availability | 2027 Non-MAG Availability | Non-MAG Availability Difference | Percent Change Non-MAG Availability |
| Blaine Aquifer | Knox | Brazos | 700 | 0 | (700) | -100.00% | 700 | 0 | (700) | -100.00% |
| Blaine Aquifer | Stonewall | Brazos | 8,700 | 0 | (8,700) | -100.00% | 8,700 | 0 | (8,700) | -100.00% |
| | | | | | | | | | | |
| Brazos River Alluvium Aquifer | Falls | Brazos | 16,684 | 0 | (16,684) | -100.00% | 16,684 | 0 | (16,684) | -100.00% |
| | | | | | | | | | | |
| Dockum Aquifer | Kent | Brazos | 6,250 | 29 | (6,221) | -99.54% | 6,250 | 29 | (6,221) | -99.54% |
| Dockum Aquifer | Nolan | Brazos | 2,824 | 849 | (1,975) | -69.94% | 2,824 | 550 | (2,274) | -80.52% |
| Dockum Aquifer | Nolan | Colorado | 2,926 | 3,166 | 240 | 8.20% | 2,926 | 1,995 | (931) | -31.82% |
| | | | | | | | | | | |
| Seymour Aquifer | Kent | Brazos | 1,180 | 902 | (278) | -23.56% | 1,179 | 902 | (277) | -23.49% |
| Seymour Aquifer | Throckmorton | Brazos | 115 | 3 | (112) | -97.39% | 115 | 3 | (112) | -97.39% |
| Seymour Aquifer | Young | Brazos | 258 | 1 | (257) | -99.61% | 258 | 1 | (257) | -99.61% |
| | | | | | | | | | | |
| Trinity Aquifer | Palo Pinto | Brazos | 12 | 1 | (11) | -91.67% | 12 | 1 | (11) | -91.67% |

# Non-MAG Availability Issues

- Most decreases in non-MAG availability do not appear to be an issue
- Blaine
  - Significant decrease in Knox and Stonewall counties, but little current or historic use; combined 546 afy assigned supply and 883 afy in WMS;
- Brazos River Alluvium
  - Falls County has significant irrigation use, 250-500 municipal use (no utilities); all assigned supply = irrigation; 1 WMS (mining- 120 to 210 afy)
- Dockum
  - Availability almost eliminated in Kent County, but little current or historic use; all assigned supply = irrigation (1,559 afy)
  - Nolan County decreased substantially, may no longer cover PWS demands (Cities of Roscoe and Sweetwater); 5,750 afy assigned supply in last planning cycle
- Seymour
  - Kent County decreased slightly to 902 afy; has 892 afy in assigned supplies and 1 WMS for 249 afy (City of Jayton)

# Potential Solutions to Non-MAG Availability Declines

- Region G can request changes from TWDB

1. Several aquifer availabilities zeroed out or significantly reduced by either GMA or TWDB or inadvertently. Consider requesting the 2022 availabilities be restored:
    1. Blaine Aquifer in Knox and Stonewall counties
    2. Brazos River Alluvium in Falls County
    3. Dockum Aquifer in Kent County
2. Dockum Aquifer in Nolan County- Availability reduced ~30-55%; PWS supply may be an issue in the future. Committee should discuss.
3. Seymour Aquifer in Kent County - Committee should discuss.

# Groundwater Supply Issues

- Calculation of supplies for groundwater users
  - Unsure of methodology used by Region G in the last round of planning
- Allocation of limited supplies

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**7. Discussion and possible action on the review of requests for use of MAG Peak Factor**

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## 8. ADJOURN