

2026 Plateau Water Plan
Handout 1 – TWDB Approved Population Revision Requests

	2030	2040	2050	2060	2070	2080
Bandera County - Guadalupe Basin						
County-Other	111	113	115	118	120	123
Guadalupe Basin Total Population	111	113	115	118	120	123
Bandera County - Nueces Basin						
County-Other	1,041	1,062	1,083	1,105	1,127	1,150
Nueces Basin Total Population	1,041	1,062	1,083	1,105	1,127	1,150
Bandera County - San Antonio Basin						
Bandera	1,949	1,988	2,028	2,069	2,111	2,152
Bandera County FWSD #1	1,074	1,095	1,117	1,140	1,163	1,186
County-Other	17,340	17,690	18,046	18,411	18,778	19,150
San Antonio Basin Total Population	20,363	20,773	21,191	21,620	22,052	22,488
Bandera County Total Population	21,515	21,948	22,390	22,843	23,300	23,760
Edwards County - Colorado Basin						
Rocksprings	416	333	267	227	187	147
County-Other	127	102	81	69	57	45
Colorado Basin Total Population	543	434	348	296	244	192
Edwards County - Nueces Basin						
Rocksprings	250	200	160	137	113	88
County-Other	313	251	201	171	141	111
Nueces Basin Total Population	563	451	361	307	253	199
Edwards County - Rio Grande Basin						
County-Other	61	49	39	33	27	21
Rio Grande Basin Total Population	61	49	39	33	27	21
Edwards County Total Population	1,167	934	748	637	525	412
Kerr County - Colorado Basin						
County-Other	591	618	637	667	698	727
Colorado Basin Total Population	591	618	637	667	698	727
Kerr County - Guadalupe Basin						
Kerrville	33,035	34,546	35,611	37,315	39,034	40,677
Kerrville South Water	3,599	3,764	3,880	4,065	4,253	4,432
County-Other	19,670	20,570	21,204	22,219	23,242	24,220
Guadalupe Basin Total Population	56,304	58,880	60,695	63,599	66,529	69,329
Kerr County - Nueces Basin						
County-Other	8	9	9	9	10	10
Nueces Basin Total Population	8	9	9	9	10	10
Kerr County - San Antonio Basin						
County-Other	236	247	254	266	279	290
San Antonio Basin Total Population	236	247	254	266	279	290
Kerr County Total Population	57,139	59,753	61,595	64,542	67,515	70,357
Kinney County - Nueces Basin						
County-Other	21	20	19	19	19	18
Nueces Basin Total Population	21	20	19	19	19	18
Kinney County - Rio Grande Basin						
Brackettville	1,077	1,020	983	960	937	914
Fort Clark Springs MUD	1,372	1,299	1,252	1,223	1,194	1,164
County-Other	481	455	439	428	418	408
Rio Grande Basin Total Population	2,930	2,774	2,674	2,611	2,549	2,486
Kinney County Total Population	2,951	2,794	2,693	2,630	2,568	2,504

2026 Plateau Water Plan
Handout 1 - (continued) TWDB Approved Population Revision Requests

	2030	2040	2050	2060	2070	2080
Real County - Colorado Basin						
County-Other	31	26	22	19	16	14
Colorado Basin Total Population	31	26	22	19	16	14
Real County - Nueces Basin						
Camp Wood	1,800	1,800	1,800	1,800	1,800	1,800
Leakey	1,744	1,751	1,758	1,766	1,773	1,780
County-Other	1,905	1,621	1,383	1,203	1,020	836
Nueces Basin Total Population	5,449	5,172	4,941	4,769	4,593	4,416
Real County Total Population	5,480	5,198	4,963	4,788	4,609	4,430
Val Verde County - Rio Grande Basin						
Del Rio Utilities Commission	35,932	36,018	36,105	36,191	36,278	36,365
Laughlin AFB	1,640	1,640	1,640	1,640	1,640	1,640
County-Other	17,639	17,915	18,144	18,229	18,315	18,402
Rio Grande Basin Total Population	55,211	55,573	55,889	56,060	56,233	56,407
Val Verde County Total Population	55,211	55,573	55,889	56,060	56,233	56,407
Region J Total Population	143,463	146,200	148,278	151,500	154,750	157,870

Approved WUG Historical Water Use Survey (2010-2020)

Modified by TWDB based on the 2020 Census group quarter pop.

Approved WUG WSP Survey Response



October 26, 2023

Mr. Lann Bookout
Region J Project Manager
Texas Water Development Board
P.O. Box 12321
Austin Texas

This document is released for the purpose of information exchange review and planning only under the authority of Tony L. Smith, P.E., October 2, 2023, TX PE#92620.

Subject: Hydrologic Variance Request for the Determination of Water Availability and Water Supplies for the 2026 Plateau Regional Water Plan (Region J)

Dear Mr. Ellis:

The Plateau Regional Water Planning Group (Region J) met on October 26, 2023, to discuss the process for determining the amount of surface water available from existing surface water sources and future water management strategies using the guidance provided by the Texas Water Development Board (TWDB) in the scope of work for the present cycle of Regional Water Planning. During this meeting, the RWPG discussed the approach for determining water availability within the region, noting where specific variances from the standard TWDB guidance will be employed towards development of the 2026 Plateau Regional Water Plan.

The RWPG approved submittal of this letter and the accompanying attachments, requesting that the TWDB allow the RWPG to use the approaches detailed herein throughout the regional planning process for analyses that determine surface water availability to existing rights and for analyses to determine the potential supplies available from new water management strategies and water management strategy projects.

[Surface Water Supplies](#)

In its guidelines for regional water planning, the TWDB requires that water availability be based on results derived from the official Texas Commission on Environmental Quality (TCEQ) Water Availability Models (WAMs). The TCEQ WAMs, which have been developed for all river basins in Texas, simulate the management and use of streamflow and reservoirs over a historical period of record, adhering to the prior appropriation doctrine, which governs the State of Texas water right priority system. The TCEQ WAMs are the fundamental tools used to determine surface water availability for water rights permitting and contain information about water rights in each respective river basin.

The Region J planning area includes the Rio Grande, Nueces, San Antonio, Colorado, and Guadalupe River Basins. For planning purposes, adjustments to these official WAMs are allowable to better reflect current and future surface water conditions in the Region. Such adjustments, as proposed herein, require the approval of the TWDB in order to be incorporated into the official TCEQ Rio Grande River Basin, Nueces River Basin, Colorado River Basin, and Guadalupe/San Antonio River Basin WAMs.

The TCEQ WAMs for these Plateau Region river basins contain information on all water rights in these basins. Embedded within the models are certain assumptions that the TCEQ specifies when analyzing water right reliabilities. Water supply availability under drought-of-record conditions is considered in the planning process to ensure that water demands can be met under critical conditions. For surface water supplies, drought-of-record

General Hydrologic Assumptions

The Region J RWPG will assess surface water availability in a manner that accurately reflects water supplies that are available for use. The RWPG requests that the TWDB approve the following assumptions for use in representing existing supplies and potential future surface water supplies in the 2026 Plateau Regional Water Plan. The WAMs containing the necessary modifications to the TCEQ WAM that incorporate these assumptions will be referred to as the "Region J WAMs." A general summary of the models and assumptions to be employed for the evaluation of existing water supply and water management strategies (WMS's) is provided below.

Assumption	Use for Existing Supplies	Use for Water Management Strategies
General		
Use most recent available versions of the TCEQ WAMs.	X	X
WAM Run 3 - full consumption of existing water rights with no (zero) return flows).	X	X
Modeling of reuse to include consideration of minimum and permitted return flows associated with WUG, including identified return flows from TCEQ WAM Run 8.	X	X
Channel losses based on factors employed within official TCEQ WAMs.	X	X
ASR evaluations will consider surface water availability as determined by the WAM compared to demand, with the firm supply being the maximum demand that could be met assuming a repetition of the period of record drought.		X
Adopted environmental flow standards will be used as incorporated into the applicable official TCEQ WAMs	X	X

4. Are you requesting to extend the period of record beyond the current applicable WAM hydrologic period? If yes, please describe the proposed methodology. Indicate whether you believe there is a new drought of record in the basin.

No

Choose an item.

Click or tap here to enter text.

5. Are you requesting to use a reservoir safe yield? If yes, please describe in detail how the safe yield would be calculated and defined, which reservoir(s) it would apply to, and why the modification is needed or preferable for drought planning purposes.

No

Choose an item.

Click or tap here to enter text.

6. Are you requesting to use a reservoir yield other than firm yield or safe yield? If yes, please describe, in a bulleted list, each modification requested including how the alternative yield was calculated, which reservoir(s) it applies to, and why the modification is needed or preferable for drought planning purposes. Examples of alternative reservoir yield analyses may include using an alternative reservoir level, conditional reliability, or other special reservoir operations.

No

Choose an item.

Click or tap here to enter text.

7. Are you requesting to use a different model (such as a RiverWare or Excel-based models) than RUN 3 of the applicable TCEQ WAM? If yes, please describe the model being considered including how it incorporates water rights and prior appropriation and how it is more conservative than RUN 3 of the applicable TCEQ WAM.

No

Choose an item.

Click or tap here to enter text.

8. Are you requesting to use a modified TCEQ WAM? If yes, please describe in a bulleted list all modifications in detail including all specific changes to the WAM and whether the modified WAM is more conservative than the TCEQ WAM RUN 3. Examples of WAM modifications may

Surface Water Hydrologic Variance Request Checklist

Texas Water Development Board (TWDB) rules¹ require that regional water planning groups (RWPG) use most current Water Availability Models (WAM) from the Texas Commission on Environmental Quality (TCEQ) and assume full utilization of existing water rights and no return flows for surface water supply analysis. Additionally, evaluation of existing stored surface water available during Drought of Record conditions must be based on Firm Yield using anticipated sedimentation rates. However, the TWDB rules also allow, and **we encourage**, RWPGs to use more representative, water availability modeling assumptions; better site-specific information; or justified operational procedures other than Firm Yield with written approval (via a Hydrologic Variance) from the Executive Administrator in order to better represent and therefore prepare for expected drought conditions.

RWPGs must use this checklist, which is intended to save time and reduce effort, to request a Hydrologic Variance for estimating the availability of surface water sources. For Questions 4 – 10, please indicate whether the requested variance is for determining Existing Supply, Strategy Supply, or both. Please complete a separate checklist for each river basin in which variances are being requested.

Water Planning Region: J

1. Which major river basin does the request apply to? Please specify if the request only applies part of the basin or only to certain reservoirs.

Colorado

2. Please give a brief, bulleted, description of the requested hydrologic variances including how the alternative availability assumptions vary from rule requirements, how the modifications will affect the associated annual availability volume(s) in the regional water plan, and why the variance is necessary or provides a better basis for planning. You must provide more-detailed descriptions in the subsequent checklist questions. Attach any available documentation supporting the request.

- Request inclusion of return flows for evaluation of strategy supplies.

3. Was this request submitted in a previous planning cycle? If yes, please indicate which cycle and note how it is different, if at all, from the previous request?

Yes

The above requests were submitted in the 2021 and 2016 planning cycles and are unchanged from the previous planning cycle request.

¹ 31 Texas Administrative Code (TAC) §§ 357.10(14) and 357.32(c)

4. Are you requesting to extend the period of record beyond the current applicable WAM hydrologic period? If yes, please describe the proposed methodology. Indicate whether you believe there is a new drought of record in the basin.

No

Choose an item.

Click or tap here to enter text.

5. Are you requesting to use a reservoir safe yield? If yes, please describe in detail how the safe yield would be calculated and defined, which reservoir(s) it would apply to, and why the modification is needed or preferable for drought planning purposes.

No

Choose an item.

Click or tap here to enter text.

6. Are you requesting to use a reservoir yield other than firm yield or safe yield? If yes, please describe, in a bulleted list, each modification requested including how the alternative yield was calculated, which reservoir(s) it applies to, and why the modification is needed or preferable for drought planning purposes. Examples of alternative reservoir yield analyses may include using an alternative reservoir level, conditional reliability, or other special reservoir operations.

No

Choose an item.

Click or tap here to enter text.

7. Are you requesting to use a different model (such as a RiverWare or Excel-based models) than RUN 3 of the applicable TCEQ WAM? If yes, please describe the model being considered including how it incorporates water rights and prior appropriation and how it is more conservative than RUN 3 of the applicable TCEQ WAM.

No

Choose an item.

Click or tap here to enter text.

8. Are you requesting to use a modified TCEQ WAM? If yes, please describe in a bulleted list all modifications in detail including all specific changes to the WAM and whether the modified WAM is more conservative than the TCEQ WAM RUN 3. Examples of WAM modifications may

Needs Analysis

1. Receive a *Needs Analysis Report* from the TWDB, which provides a comparison of existing water supplies and projected water demands for each water user group (WUG) and wholesale water provider (WWP) in the Region. Based on this comparison, the report identifies WUGs and WWPs that are expected to experience needs for additional water supplies within the 50-year time frame of the regional water plan.

Identification and Selection Process

2. Review and consider recommended water management strategies adopted by the water planning group for the *2021 Far West Texas Water Plan*.
3. Review and consider any issues identified in the most current TWDB Water Loss Audit Report, including leak detection and supply side analysis.
4. Solicit current water planning information, including specific water management strategies of interest from WUGs and WWPs with identified needs.
5. Review and consider the most recent Water Supply Management, Water Conservation, and/or Drought Contingency Plans, where available, from WUGs and WWPs with identified needs.
6. Consider potentially feasible water management strategies that may include, but are not limited to (Chapter 357 Subchapter C §357.34):
 - Extended use of existing supplies including:
 - a. System optimization and conjunctive use of water resources
 - b. Reallocation of reservoir storage to new uses
 - c. Voluntary redistribution of water resources including contracts, water marketing, regional water banks, sales, leases, options, subordination agreements, and financing agreements
 - d. Subordination of existing water rights through voluntary agreements
 - e. Enhancement of yields of existing sources
 - f. Improvement of water quality including control of naturally occurring chlorides
 - g. Drought management
 - New supply development including:
 - a. Construction and improvement of surface water and groundwater resources
 - b. Brush control
 - c. Precipitation enhancement
 - d. Desalination
 - e. Water supply that could be made available by cancellation of water rights
 - f. Rainwater harvesting

- g. Aquifer storage and recovery
 - Conservation and drought management measures including demand management
 - Reuse of wastewater
 - Interbasin transfers of surface water
 - Emergency transfers of surface water
- 7. Consider other *potentially feasible water management strategies* suggested by planning group members, stakeholders, and the public.
- 8. Based on the above reviews and considerations, establish a preliminary list of *potentially feasible water management strategies*. At a discussion level, consider the following feasibility concerns for each strategy:
 - Water supply source availability during drought-of-record conditions
 - Cost/benefit
 - Water quality
 - Threats to agriculture and natural resources
 - Impacts to the environment, other water resources, and basin transfers
 - Socio-economic impacts
- 9. Based on the above discussion level analysis, select a final list of *potentially feasible water management strategies* for further technical evaluation using detailed analysis criteria.