



SCOPE OF WORK COMMITTEE MEETING

12:00 P.M.

Thursday, November 7, 2024

BRAZOS RIVER AUTHORITY

Lt. Gen. Phillip J. Ford Central Office

4600 Cobbs Dr. Waco, TX 76710



1. CALL MEETING TO ORDER

2. NOTICE OF MEETING

3. ATTENDANCE AND ANNOUNCEMENTS

4. PUBLIC INPUT (limited to 5 minutes each)



5. Discussion and possible action on recommended Water Management Strategies for use in the 2026 Brazos G Plan

Brazos G Regional Water Planning

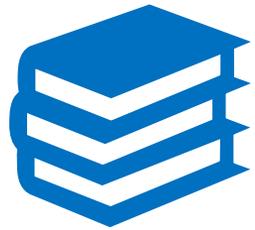
Item 8.1

Discussion and Possible Action on Report from Technical Consultant

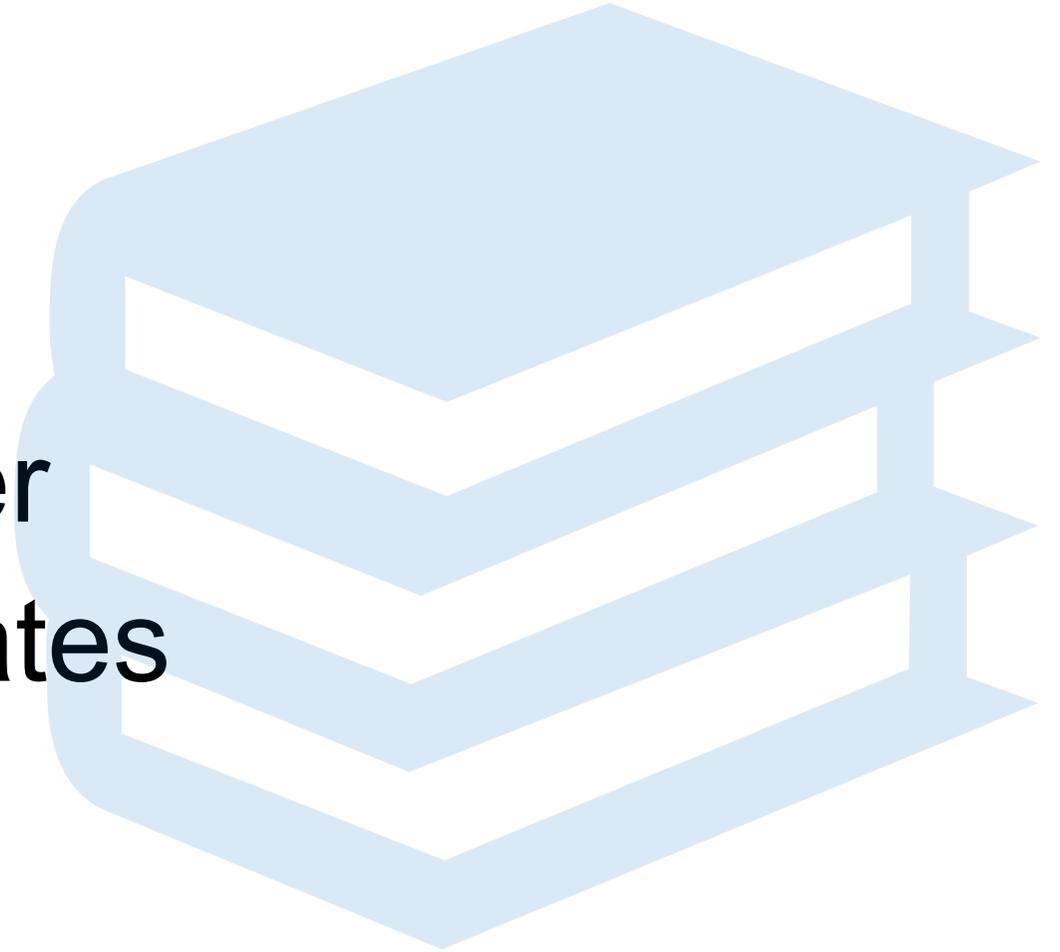


8.1

Regional Planning Updates



Chapter 5C – Water Conservation Updates



Agenda

- Conservation Background and Context
- Scope of Work
- Municipal Water Conservation
 - Previous Cycle
 - Revised Recommendation by WCAC this Cycle
 - Proposed Approach from Technical Consult Team
- Next Steps/Schedule

Conservation Background and Context

- **Water Conservation Implementation Task Force (no longer active)**
 - Established in 2003
 - Developed **Best Management Practices Guide** (published by TWDB in 2004)
 - Set a goal of **140** gallons per capita per day (gpcd)
 - Calculated based on total water use minus indirect reuse, divided by the population
- **Water Conservation Advisory Council (WCAC)**
 - Established in 2007
 - Directed by statute to monitor new technologies for possible inclusion as BMPs in the Best Management Practices Guide
- **Texas Water Development Board (TWDB)**
 - Provides leadership, planning, and financial **assistance**
 - Collects and disseminates water-related data
- **Texas Commission on Environmental Quality (TCEQ)**
 - Provides **regulatory oversight** of Water Conservation Plan (WCP) and Drought Contingency Plan (DCP) submittals

Conservation Background and Context Continued

- GPCD Definitions

- **Total GPCD** – Total water used less wholesale sales divided by total population
- **Municipal GPCD** – Total water used less wholesale, industrial, and power sales divided by population
- GPCD for Water Conservation Plans (WCPs)
 - Five-year average of **Total GPCD**
- GPCD used in regional water planning
 - Dry-year **municipal GPCD** less conservation savings due to plumbing code requirements

Scope of Work for Task 5C: Conservation Recommendations

Discussion Items

1. Evaluate WUGs' water conservation plans (WCPs) and Model WCPs to inform Water Management Strategies (WMSs)
 1. New plans for this cycle: 32 out of 106 required received, 12 non-required received
2. Set drought-based GPCD goals for each municipal WUG
3. Explain non-recommendation of conservation WMSs, if applicable
4. Determine highest practicable water conservation levels for WUGs that have a WMS with an Interbasin Transfer (IBT)
5. Develop separate water loss mitigation WMS

Municipal Water Conservation Approach from Previous Cycle

- No specific measures recommended.
 - Provide resources related to the TWDB BMPs for WUGs to choose from freely.
- Assume a 1% annual reduction until WUGs reach GPCD target
 - Change Target is 120 GPCD for selected WUGs in Williamson County*
 - Target is 140 GPCD for all other WUGs
- Recommendation applies to WUGs with per capita demand > targets, regardless of need.

*This target was first introduced in the 2016 RWP, however, the reason for this recommendation was not provided in the 2016 or 2021 RWPs. Georgetown has identified 140 GPCD as achievable. 11

Revised GPCD Goal Recommendation by WCAC this Cycle

- Eliminates the use of 140 GPCD as a default planning target
- 1% Annual Compounded Reduction:
 - Achieves ~40% total reduction over 50 years
- Challenges for WUGs:
 - As noted by WCAC, long-term goals (beyond 2040) may be ambitious for WUGs already using water efficiently

Municipal Conservation Approach this Cycle

- **Potential Approach (similar to the previous cycle):**
 - Provide the comprehensive list of the TWDB BMPs for all WUGs to choose **freely**.
 - Assume a 1% annual reduction until reaching a revised target.
- **Water Loss Reduction (Deemed cost prohibitive in 2016 RWP, not considered in previous cycle):**
 - WUGs with reported water loss greater than 15%.
 - Waterline replacements to reduce water loss due to leaks.
 - Assume reduction to 15% water loss.

Suggested Approach for 2026 Plan – Municipal WUGs Advanced Conservation

Target efficiency: 140 gpcd (same as 2021 Plan)

- Reduce gpcd by 1% annually until 140 gpcd met, then hold constant
- Williamson County – 120 gpcd target by 2070
- All WUGs with gpcd > 140

BMP recommendations (same as 2021 Plan)

- Use TWDB reports to identify BMPs typically used in Brazos G Area
 - Vary by utility size and rural/urban/suburban classification
- Use Municipal Water Conservation Planning Tool
 - Develop generalized conservation savings and costs for typical utility classifications
- Consider water loss audits for calculating replacement costs for WUGs reporting > 15% water losses

Benefits

- Consistent with previous planning cycles
- Improves information regarding conservation savings and costs
- Incorporates practices specific to Brazos G
- Continues to not “prescribe” a specific set of BMPs

Municipal WUGs: Calculated Conservation Savings

- 159 WUGs in Brazos G with GPCD above 140.
 - Potential savings with advanced conservation approximately 29,800 in 2030 up to 189,900 by 2080.
- 44 WUGs with reported water loss greater than 15%.
 - Potential savings with water loss reduction approximately 6,600 ac-ft in 2030 up to 8,500 ac-ft by 2080.

Suggested Approach for 2026 Plan – Irrigation

Target efficiency (same as 2021 Plan)

- Reduce irrigation use by 3% in 2030, 5% in 2040, and 7% in 2050-2080
- All WUGs with needs

BMP recommendations (same as 2021 Plan)

- Summarize TWDB's "Best Management Practices for Agricultural Water Users, Nov 2013"
 - Applicability, implementation, savings, cost-effectiveness
- Prepare updated list of common irrigation BMPs
- Develop savings and costs from TWDB document

Benefits

- Consistent with previous planning cycles
- Improves information regarding conservation savings and costs
- Continues to not "prescribe" a specific set of BMPs

Irrigation WUGs with Needs: Calculated Conservation Savings

- 18 counties in Brazos G with reported irrigation needs during the 2030-2080 planning period.

WUG	Water Saved (AFY) with Voluntary Reduction in Demand of 3% by 2030; 5% by 2040; and 7% from 2050-2080					
	2030 (3%)	2040 (5%)	2050 (7%)	2060 (7%)	2070 (7%)	2080 (7%)
Irrigation, Bell	93	155	218	218	218	218
Irrigation, Comanche	788	1,314	1,839	1,839	1,839	1,839
Irrigation, Grimes	21	36	49	49	49	49
Irrigation, Hamilton	34	57	80	80	80	80
Irrigation, Haskell	1,493	2,488	3,483	3,483	3,483	3,483
Irrigation, Hill	14	23	32	32	32	32
Irrigation, Johnson	16	28	38	38	38	38
Irrigation, Jones	81	135	189	189	189	189
Irrigation, Knox	1,111	1,851	2,592	2,592	2,592	2,592
Irrigation, Lampasas	13	22	31	31	31	31
Irrigation, McLennan	154	256	359	359	359	359
Irrigation, Nolan	389	648	880	863	852	852
Irrigation, Palo Pinto	65	108	152	152	152	152
Irrigation, Robertson	2,198	3,664	5,129	5,129	5,129	5,129
Irrigation, Stephens	5	8	11	11	11	11
Irrigation, Taylor	42	72	100	100	100	100
Irrigation, Williamson	12	20	28	28	28	28
Irrigation, Young	19	32	45	45	45	45
Total Brazos G water savings for Irrigation WUGs with needs (AFY)	6,548	10,917	15,255	15,238	15,227	15,227

Suggested Approach for 2026 Plan – Industrial (Mining, Manufacturing)

Target efficiency (same as 2021 Plan)

- Reduce industrial use by 3% in 2030, 5% in 2040, and 7% in 2050-2080
- All WUGs with needs

BMP recommendations (same as 2021 Plan)

- Summarize TWDB's "Best Management Practices for Industrial Water Users, Feb 2013"
 - Applicability, implementation, savings, cost-effectiveness
- Prepare updated list of common industrial BMPs
- Develop savings only (costs will vary substantially between industrial sites)

Benefits

- Consistent with previous planning cycles
- Improves information regarding conservation savings and costs
- Continues to not "prescribe" a specific set of BMPs

Manufacturing WUGs with Needs: Calculated Conservation Savings

- 14 counties in Brazos G with reported manufacturing needs during the 2030-2080 planning period.

WUG	Water Saved (AFY) with Voluntary Reduction in Demand of 3% by 2030; 5% by 2040; and 7% from 2050-2080					
	2030 (3%)	2040 (5%)	2050 (7%)	2060 (7%)	2070 (7%)	2080 (7%)
Manufacturing, Bell	29	50	73	75	78	81
Manufacturing, Burleson	4	7	10	11	11	12
Manufacturing, Comanche	1	1	2	2	2	2
Manufacturing, Eastland	2	3	4	5	5	5
Manufacturing, Erath	3	5	7	7	7	8
Manufacturing, Hamilton	1	1	2	2	2	2
Manufacturing, Lampasas	7	12	18	18	19	20
Manufacturing, Limestone	7	13	19	19	21	22
Manufacturing, McLennan	172	298	433	449	465	483
Manufacturing, Nolan	16	28	41	42	44	45
Manufacturing, Taylor	22	37	54	56	58	61
Manufacturing, Washington	21	36	52	54	56	59
Manufacturing, Williamson	58	101	147	152	158	164
Manufacturing, Young	3	5	7	8	8	8
Total Brazos G water savings for Manufacturing WUGs with needs (AFY)	346	597	869	900	934	972

Mining WUGs with Needs: Calculated Conservation Savings

- 14 counties in Brazos G with reported mining needs during the 2030-2080 planning period.

WUG	Water Saved (AFY) with Voluntary Reduction in Demand of 3% by 2030; 5% by 2040; and 7% from 2050-2080					
	2030 (3%)	2040 (5%)	2050 (7%)	2060 (7%)	2070 (7%)	2080 (7%)
Mining, Brazos	80	135	191	192	194	196
Mining, Burleson	167	278	390	390	390	390
Mining, Eastland	10	16	23	23	23	23
Mining, Grimes	7	11	16	16	16	16
Mining, Hood	131	237	356	375	389	399
Mining, Lee	24	39	55	55	55	55
Mining, Limestone	106	181	262	268	204	209
Mining, Milam	25	42	58	59	59	59
Mining, Nolan	2	4	5	5	5	5
Mining, Palo Pinto	1	1	2	2	2	2
Mining, Somervell	41	73	107	112	115	118
Mining, Taylor	15	27	38	39	39	40
Mining, Throckmorton	3	6	8	8	8	8
Mining, Washington	22	36	51	51	51	51
Total Brazos G water savings for Mining WUGs with needs (AFY)	634	1,086	1,562	1,595	1,550	1,571

Suggested Approach for 2026 Plan – Steam Electric

Same approach as 2026 Plan:

No conservation recommendations suggested due to the widely differing water use among the different facilities.

Suggested Approach for 2026 Plan – Livestock

Same approach as 2026 Plan:

No conservation recommendations suggested.

Next Steps and Schedule

- Continued WUG engagement.
- Costing of WMSs.
- Development of next committee meeting content.

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**6. Consider Agenda Items and Date for the next Scope of
Work Committee Meeting**



7. ADJOURN