

# *GMA 12*

## Draft Desired Future Conditions Explanatory Report

by

*GMA 12 Consultant Team*

*January 21, 2022*

# Overview

- ▣ Similar outline to 2017 Explanatory Report
- ▣ Consultants working jointly under GM guidance since November 30
  - Nine factor discussions divided among the consultants with presentations occurring at GMA meetings over the past about two years
  - Each GCD responsible for responding to comments received
  - Each GCD responsible for preparing justification for declaring an aquifer to be non-relevant

# Report Outline

- ▣ Introduction
- ▣ GMA 12 Desired Future Conditions
- ▣ Policy Justification
- ▣ Technical Justification
- ▣ Factors Considered for the DFCs
- ▣ Other Desired Future Conditions
- ▣ Recommendations and Comments Received
- ▣ Summary
- ▣ References

# Appendices

- A AGENDAS FOR GMA 12 JOINT GROUNDWATER PLANNING MEETINGS FROM 2018 TO 2021
- B MINUTES FOR GMA 12 JOINT GROUNDWATER PLANNING MEETINGS FROM 2018 TO 2021
- C GMA-12 RESOLUTION FOR PROPOSED DFCS DATED APRIL 22, 2021
- D NOTICES AND MINUTES OF GCD PUBLIC HEARINGS ON PROPOSED GMA 12 DFCS
- E NOVEMBER 12, 2021 PRESENTATION "GMA 12: S-12, S-19, AND S-20 MODEL RESULTS"
- F TERS FOR GMA 12 (GAM TASK 13-035\_v2)
- G GAM RUN 18-021 FOR BRAZOS VALLEY GCD
- H GAM RUN 17-019 FOR FAYETTE COUNTY GCD
- I GAM RUN 16-014 FOR LOST PINES GCD
- J GAM RUN 18-020 FOR MID-EAST TEXAS GCD
- K GAM RUN 16-015 FOR POST OAK SAVANNAH GCD
- L JULY 24, 2020 PRESENTATION "AQUIFER USES AND CONDITIONS CONSIDERATION DISCUSSION"
- M JULY 24, 2020 PRESENTATION "GMA-12: NEEDS AND STRATEGIES"
- N JANUARY 29, 2020 PRESENTATION "HYDROLOGICAL CONDITIONS CONSIDERATION DISCUSSION"
- O SEPTEMBER 18, 2020 PRESENTATION "PRESENTATION TO GMA-12: CONSIDERATION FOR ENVIRONMENTAL IMPACTS"

# Appendices (con't)

- P JULY 24, 2020 PRESENTATION "EVALUATION OF THE POTENTIAL IMPACT OF SUBSIDENCE IN GMA12"
- Q OCTOBER 22, 2020 PRESENTATION "GMA12 SOCIOECONOMIC IMPACTS CONSIDERATIONS"
- R SEPTEMBER 18, 2020 PRESENTATION "GROUNDWATER MANAGEMENT AREA 12: CONSIDERATION OF THE IMPACT ON THE INTERESTS AND RIGHTS IN PRIVATE PROPERTY IN THE ADOPTION OF DESIRED FUTURE CONDITIONS OF AQUIFERS"
- S POST OAK SAVANNAH GCD POSITION PAPER ON GMA 12 PROPOSED DFCS FOR THE 3RD JOINT PLANNING CYCLE
- T BRAZOS VALLEY GCD WRITTEN RESPONSE TO POST OAK SAVANNAH GCD POSITION PAPER ON PROPOSED DFCS
- U GMA 12'S RESPONSES TO COMMENTS FOR BRAZOS VALLEY GCD
- V GMA 12'S RESPONSES TO COMMENTS FOR FAYETTE COUNTY GCD
- W GMA 12'S RESPONSES TO COMMENTS FOR LOST PINES GCD
- X GMA 12'S RESPONSES TO COMMENTS FOR POST OAK SAVANNAH GCD

# Desired Future Conditions

Table 2-1. Adopted DFCs for the Sparta, Queen City, Carrizo, Calvert Bluff, Simsboro, and Hooper Aquifers

GCD or County	Average Aquifer Drawdown (feet) measured from January 2011 through December 2070					
	Sparta	Queen City	Carrizo	Calvert Bluff	Simsboro	Hooper
Brazos Valley GCD *	53	44	84	111	262	167
Fayette County GCD **	43	73	140	Declared as non-relevant		
Lost Pines GCD	22	28	134	132	240	138
Mid-East Texas GCD	25	20	48	57	76	69
Post Oak Savannah GCD	32	30	146	156	278	178
Falls County	—	—	—	—	7	3
Limestone County	—	—	—	2	3	3
Navarro County	—	—	—	0	1	0
Williamson County	—	—	—	25	31	24
<b>GMA-12</b>	<b>33</b>	<b>32</b>	<b>96</b>	<b>98</b>	<b>169</b>	<b>110</b>

\* Brazos Valley GCD DFCs are for 2000 through December 2070.

\*\* Fayette County GCD DFCs are for all of Fayette County.

# Desired Future Conditions (con't)

Table 2-2. Adopted DFCs for the Yegua-Jackson Aquifer

GCD	Average Aquifer Drawdown (feet) measured from January 2011 through December 2069
Brazos Valley GCD	67
Fayette County GCD	81
Lost Pines GCD	—
Mid-East Texas GCD	8
Post Oak Savannah GCD	61
<b>GMA-12</b>	<b>55</b>

Table 2-3. Adopted DFCs for the Brazos River Alluvium Aquifer

GCD	County	Brazos River Alluvium Aquifer
Brazos Valley	Brazos and Robertson	North of State Highway 21: Percent saturation shall average at least 30% of total well depth from January 2013 to December 2069.
		South of State Highway 21: Percent saturation shall average at least 40% of total well depth from January 2013 to December 2069.
Post Oak Savannah	Burleson	A decrease in 6 feet in the average saturated thickness over the period from January 2010 to December 2069.
	Milam	A decrease of 5 feet in average saturated thickness over the period from January 2010 to December 2069.

# Desired Future Conditions Public Hearings

GCD	Public Hearing Date
Brazos Valley GCD	June 10, 2021
Fayette County GCD	July 12, 2021
Lost Pines GCD	August 18, 2021
Mid-East Texas GCD	June 22, 2021
Post Oak Savannah GCD	July 13, 2021

# Non-Relevant Aquifers\*

- ▣ Justification for Non-Relevant Aquifers Handled by Respective GCDs
- ▣ LPGCD (Trinity, Yegua-Jackson)
- ▣ FCGCD (Wilcox)
- ▣ BVGCD (Gulf Coast Aquifer)

\* justifications included in appendices

# Policy Justification

- ▣ Policy was to allow Districts to Set Different DFCs for Different Parts of Aquifer
  - Aquifer production potential varies among districts
  - Historical production varies among the districts
  - Importance of GW production to social-economics varies among the districts
  - Texas Water Code allows DFCs to differ substantially across different geographic areas as aquifer conditions can vary substantially
  - GCDs Cannot Regulate Outside their Boundaries

# Technical Justification

- ▣ Application of GAMs
- ▣ Recognition of Previous DFCs
- ▣ Recognition of Existing Permits
- ▣ Consideration of Nine Factors  
(presentations in appendices)

# DFCs Considered Other Than Those Adopted\*

- ▣ No other DFCs for Yegua-Jackson
- ▣ No other DFCs for Brazos River Alluvium
- ▣ Sparta/Queen City/Carrizo-Wilcox Aquifers
  - Lower Carrizo Pumping in POSGCD
  - Lower and Higher Simboro Pumping in LPGCD
  - Lower pumping in Caldwell and Gonzales Counties

\* a motion was made to consider the DFCs

# Comments and Response to Comments

- ▣ Report addresses Comments Received During Comment Period
- ▣ GCDs prepared their own responses
  - Each GCD consultants worked jointly on responses
  - Additional reviews by GMs have occurred or are ongoing
- ▣ Most comments received by LPGCD and POSGCD
- ▣ Mid-East Texas GCD did not receive any comments

*QUESTIONS?*