GMA 14 RESOLUTION 2024-01:
DEVELOPMENT OF UPDATED GROUNDWATER AVAILABILITY MODEL

THE STATE OF TEXAS	§
	§
GROUNDWATER MANAGEMENT AREA 14	§
	§
GROUNDWATER CONSERVATION DISTRICTS	§

WHEREAS, Texas Water Code § 36.0015(b) states that groundwater conservation districts are the preferred method of groundwater management in Texas and requires groundwater conservation districts to use the best available science in the conservation and development of groundwater;

WHEREAS, Texas Water Code § 36.108(d) requires groundwater conservation districts to consider groundwater availability models and other data or information for the management area when proposing and adopting desired future conditions;

WHEREAS, the groundwater conservation districts located wholly or partially within Groundwater Management Area 14 ("GMA 14"), as designated by the Texas Water Development Board, as of the date of this resolution are as follows: Bluebonnet Groundwater Conservation District, Brazoria County Groundwater Conservation District, Lone Star Groundwater Conservation District, Lower Trinity Groundwater Conservation District, and Southeast Texas Groundwater Conservation District (collectively hereinafter "the GMA 14 Districts");

WHEREAS, the US Geological Survey has completed an updated groundwater flow model of the area in cooperation with the Harris-Galveston Subsidence District and the Fort Bend Subsidence District known as the Gulf 2023 model;

WHEREAS, the Texas Water Development Board received public comments on the Gulf 2023 model as part of the process to review the Gulf 2023 model for potential adoption as a Groundwater Availability Model (GAM);

WHEREAS, the GMA 14 Districts identified the limitations of the Gulf 2023 model in their comments to the Texas Water Development Board and support a timeline to update data and recalibrate the Gulf 2023 model with the objective of developing a model that is better suited to simulating regional groundwater flow for joint planning purposes, and would be submitted for approval as an Updated Groundwater Availability Model (Updated GAM);

WHEREAS, the Texas Water Development Board has published a guidance document (dated May 2023) related to obtaining approval for the submittal of an Updated GAM developed by consultants;

WHEREAS, a written resolution adopted by two-thirds of groundwater conservation district representatives in the groundwater management area within the model boundary is one of the requirements to obtain Texas Water Development Board Approval for the Updated GAM;

WHEREAS, Lone Star Groundwater Conservation District will identify which tasks from the approved scope of work, attached as Exhibit A, will be included in the Updated GAM; and

WHEREAS, at the May 14, 2024 GMA 14 meeting, after a motion was duly made and seconded, the GMA 14 Districts adopted this resolution supporting the development of an Updated GAM for use in the joint planning process.

NOW, THEREFORE, BE IT RESOLVED BY THE AUTHORIZED VOTING REPRESENTATIVES OF THE GMA 14 DISTRICTS AS FOLLOWS:

1. The above recitals are true and correct.

2. The GMA 14 Districts hereby approve the timeline for completion of the Updated GAM.

3. The GMA 14 Districts hereby support submitting an Updated GAM of the northern portion of the Gulf Coast Aquifer to the Texas Water Development Board that adheres to the guidance document of May 2023.

4. The Updated GMA will be completed and submitted to the Texas Water Development Board after a draft of the model and documentation have been reviewed and approved by the GMA 14 Districts. The review of the draft is independent of the Texas Water Development Board public review process outlined in their May 2023 guidance document.

5. Lone Star Groundwater Conservation District and its agents and representatives, individually and collectively, are further authorized to take all actions necessary to develop and complete the Updated GAM.

AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 14th day of May 2024.

ATTEST:

Zach Holland 6/3/24
Zach Holland, Bluebonnet Groundwater Conservation District

BH 6/5/24
Beverly Hopkins, Brazoria County Groundwater Conservation District

5/23/24
Sarah Kouba, Lone Star Groundwater Conservation District

Gary Ashmore 6/4/2024
Gary Ashmore, Lower Trinity Groundwater Conservation District

John M Martin 5/28/2024
John Martin, Southeast Texas Groundwater Conservation District

REVISED: April 30, 2024 (Holland)

GMA 14 Model Development*

Task Number	SubTask Number	Technical Memorandum (TM) Number	MODFLOW Packages	Version 1 Completion Date	Most Recent Version Completion Date	Assignments for First Draft
0		1	Gulf 2023 Unstructured Grid	11/13/2023		
1	**Reduce Gulf 2023 File Size**					
	1a	2	DIS, IC6, NPF, IMS	11/13/2023		
	1b	3	CSUB, STO (fix for delay/no-delay beds)	2/28/2024	4/10/2024	Lone Star GCD
		~~3a~~	~~CSUB (with LSGCD compaction data)~~	~~6/30/2024~~		~~Lone Star GCD~~
	1c	4	RCH	5/30/2024		Bluebonnet GCD
	1d	5	WEL	5/30/2024		Bluebonnet GCD to verify locations, updated later with TMs 12, 13, and 14
	1e	6	NPF Verification (fix initial K values)	5/30/2024		LSGCD in MoCo, BGCD elsewhere
	1f	7	RIV, DRN, GHB	5/30/2024		Bluebonnet GCD
	1g	8	Parameter File	5/30/2024		Bluebonnet GCD
	1h	9	Grid File	11/13/2023		
2	**Annual Stress Periods**					
	2a	10	TDIS	11/13/2023		
	2b	11	Annual Averages for RCH and WEL	5/30/2024		Pending Completion of 4, 5, 12, 13, and 14
3	**Recalibration**					
	3a	12	Initital Pumping Values - Montgomery County	5/15/2024		Lone Star GCD
	3b	13	Initital Pumping Values - Austin and Waller Counties	5/30/2024		Bluebonnet GCD
	3c	14	Initial Pumping Values - All other counties	5/30/2024		Bluebonnet GCD
	3d	15	CSUB (with LSGCD compaction data)	6/30/2024		Lone Star GCD
	3e	16	Calibration Targets	5/1/2024		Lone Star GCD
	3f	17	Post-Processors used for calibration	5/30/2024		Lone Star GCD
	3g	18	Initial Run of Model	6/15/2024		Joint
	3h	19	Calibration (non-PEST and PEST runs)	8/31/2024		Version 1 - final in November
4	**Final Documentation**					
		N/A	Summary of Model Development and Calibration	**Jan-Mar 2025****		Report with TMs as Appendices

*Flexibility with most dates, itemized highlight for documentation purposes only
**Date extended; TWDB needs ~2 months for review
Defined and quantified new data for update; TWDB affirmed

EXHIBIT A