

RESOLUTION TO ADOPT DESIRED FUTURE CONDITIONS

FOR AQUIFER(S) IN GROUNDWATER MANAGEMENT AREA 12

THE STATE OF TEXAS

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GROUNDWATER MANAGEMENT AREA 12

GROUNDWATER CONSERVATION DISTRICTS

WHEREAS, Texas Water Code § 36.108 requires the groundwater conservation districts located in whole or in part in a groundwater management area ("GMA") designated by the Texas Water Development Board to adopt desired future conditions for the relevant aquifers located within the management area;

WHEREAS, the groundwater conservation districts located wholly or partially within Groundwater Management Area 12 ("GMA 12"), as designated by the Texas Water Development Board, as of the date of this resolution are as follows: Mid-East Texas Groundwater Conservation District, Brazos Valley Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, Lost Pines Groundwater Conservation District, and Fayette County Groundwater Conservation District (collectively hereinafter "the GMA 12 Districts");

WHEREAS, the GMA 12 Districts are each governmental agencies and bodies politic and corporate operating under Chapter 36, Water Code;

WHEREAS, the GMA 12 Districts desire to fulfill the requirements of Texas Water Code § 36.108 through mutual cooperation and joint planning efforts;

WHEREAS, the GMA 12 Districts have had numerous public meetings, including a Stakeholder meeting for the specific purpose of receiving comments and input from stakeholders within GMA 12, at which they have engaged in joint planning efforts to promote more comprehensive management of the aquifers located in whole or in part in Groundwater Management Area 12;

WHEREAS, the GMA 12 Districts may establish different desired future conditions for: (1) each aquifer, subdivision of an aquifer, or geologic strata located in whole or in part within the boundaries of GMA 12; or (2) each geographic area overlying an aquifer in whole or in part or subdivision of an aquifer within the boundaries of GMA 12;

WHEREAS, the GMA 12 Districts recognize that GMA 12 includes a geographically and hydrologically diverse area with a variety of land uses and a diverse mix of water users;

WHEREAS, the GMA 12 Districts have considered the relevant aquifers, subdivisions thereof, and geologic strata located in whole or in part within the boundaries of GMA 12, and have further considered the hydrogeologic characteristics of the same, as well as the various uses and users of groundwater produced from such aquifers, subdivisions, and strata;

WHEREAS, GMA 12 Districts held a meeting, which was open to the public, at 10:00 a.m. on Wednesday, June 30, 2011, in the Milano Community and Civic Center located at 120 West Avenue E, Milano, Texas;

[Type text]

WHEREAS, notice of said June 30, 2011, meeting was properly given by each and all of the GMA 12 Districts in accordance with Chapter 36, Water Code, and Chapter 551, Government Code, and a true and correct copy of each of the notices has been attached hereto in Appendix A and is incorporated herein for all purposes;

WHEREAS, at least two-thirds of the GMA 12 Districts had a voting representative in attendance at said June 30, 2011, meeting in accordance with Section 36.108, Texas Water Code; to wit, the following districts had a voting representative in attendance at said meeting: Mid-East Texas Groundwater Conservation District, Brazos Valley Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, Lost Pines Groundwater Conservation District, and Fayette County Groundwater Conservation District;

WHEREAS, it is the intent and purpose of the GMA 12 Districts by adoption of this resolution to fulfill the requirements of Texas Water Code § 36.108, including establishing "desired future conditions for the relevant aquifers" within GMA 12 for the specific aquifer(s) and desired future conditions described under "Appendix B" attached hereto and incorporated herein for all purposes;

WHEREAS, at said June 30, 2011, meeting, after a motion was duly made and seconded that the GMA 12 Districts adopt this resolution amending and establishing desired future conditions for the aquifer(s) described under "Appendix B", the motion prevailed by the following vote:

Yegua-Jackson            5 Ayes, 0 Nays;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth under Appendix B, the GMA 12 Districts have considered all of the criteria required by Chapter 36 of the Texas Water Code and other information, including without limitation groundwater availability models and runs of those models to determine the effects of various conditions and parameters, hydrogeologic reports available for the relevant aquifers, and other technical data and information;

WHEREAS, many of the groundwater availability models, runs, hydrogeologic reports, and other technical data and information considered and determined to be reliable sources of information by the GMA 12 Districts in establishing these desired future conditions for the aquifer(s) have been attached hereto or referenced in the documents attached hereto under Appendix B;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth under Appendix B, the GMA 12 Districts have considered the uses and conditions of the aquifer(s) in different geographic areas within GMA 12 and what the effects and impacts of adopting such desired future conditions will have upon the condition of the aquifer(s) and the uses and users of groundwater from the aquifer(s) both now and in the future;

WHEREAS, after considering such anticipated effects and impacts these desired future conditions will have on the aquifer(s), uses, and users of groundwater, and considering all of the other criteria required by Chapter 36 of the Texas Water Code, including without limitation the groundwater resource management duties and responsibilities of the GMA 12 Districts individually and collectively, the GMA 12 Districts have determined that the desired future conditions for the aquifer(s) set forth under Appendix B are reasonable;

**NOW, THEREFORE, BE IT RESOLVED BY THE AUTHORIZED VOTING REPRESENTATIVES OF THE GMA 12 DISTRICTS AS FOLLOWS:**

1. The above recitals are true and correct.

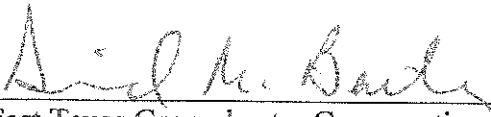
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2. The authorized voting representatives of the GMA 12 Districts hereby amend and establish the desired future conditions of the aquifer(s) as set forth in Appendix B by the vote reflected in the above recitals.
3. The GMA 12 Districts and their agents and representatives, individually and collectively, are further authorized to take any and all actions necessary to implement this resolution.
4. The desired future conditions of the aquifer(s) adopted by the GMA 12 Districts and attached hereto shall be effective immediately and shall continue in effect until amended, superseded, or repealed.

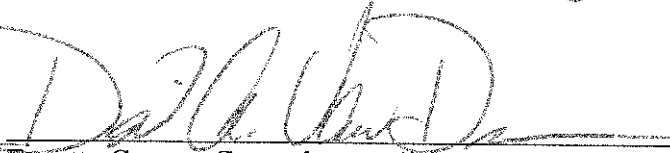
AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 30th day of June, 2011.

ATTEST:



Mid-East Texas Groundwater Conservation District



Fayette County Groundwater Conservation District



Brazos Valley Groundwater Conservation District



Lost Pines Groundwater Conservation District



Post Oak Savannah Groundwater Conservation District

ATTACHMENTS

Appendix A: Copies of notices of June 30, 2011, meeting

Appendix B: Adopted Desired Future Conditions and supporting information

[Type text]

**APPENDIX B**  
**GMA 12 DESIRED FUTURE CONDITIONS**  
**FOR THE YEGUA-JACKSON AQUIFER**  
**June 30, 2011**

GMA 12 adopted DFCs in Table B-1 for its member districts based on the average aquifer drawdown (ft) from January 2010 to January 2060. Lost Pines GCD did not submit a DFC for the Yegua-Jackson Aquifer because the district declared the aquifer as a non-relevant aquifer for joint planning purposes. The Brazos Valley GCD submitted separate DFCs for the Jackson Aquifer and Yegua Aquifer.

GMA 12 used a version of the Yegua-Jackson GAM (Deeds and others, 2010) to simulate drawdown from 2010 to 2060 using a pumping file designated as "YGJK-2060-0405.wel." Table B-2 provides average drawdowns simulated using the Yegua-Jackson GAM with the pumping file GMA 12 YGJK-2060-0405.wel.

**Table B-1. Adopted Desired Future Conditions for GMA 12 for the Yegua and Jackson Aquifers**

District	Aquifer(s)	Time Period	Average Aquifer Drawdown (ft)
BRAZOS VALLEY	Yegua	2010 to 2060	70
	Jackson		110
FAYETTE COUNTY	Yegua-Jackson	2010 to 2060	75
LOST PINES	Yegua-Jackson	NA	declared as non-relevant
MID-EAST TEXAS	Yegua-Jackson	2000 to 2060	5
POST OAK SAVANNAH	Yegua-Jackson	2010 to 2060	100

**Table B-2. Calculated Average Drawdowns Based from a Simulation Using the Yegua-Jackson GAM and GMA 12 Pumping Well File YGJK-2060-0405.wel**

District	Aquifer(s)	Time Period	Average Aquifer Drawdown (ft)
BRAZOS VALLEY	Yegua	2010 to 2060	67.1
	Jackson		113.1
FAYETTE COUNTY	Yegua-Jackson	2010 to 2060	73.4
LOST PINES	Yegua-Jackson	2010 to 2060	39.0
MID-EAST TEXAS	Yegua-Jackson	2000 to 2060	1.4
POST OAK SAVANNAH	Yegua-Jackson	2010 to 2060	95.7

Based on the principle of using the GAM as a joint planning tool and the fact that the GAM predictions contain uncertainty, GMA 12 considered the DFCs to be compatible and physically possible if the simulated average drawdown in Table B-2 are within 5 feet or 5 percent of the adopted DFCs in Table B-1. Factors considered for determining tolerance criteria include:

- model calibration results and statistics,
- information used to calibrate the GAM,
- aquifer and recharge information collected since the GAM was developed,
- sensitivity of the GAM calibration and GAM predictions to changes in the model parameters, and
- range of uncertainty in the model parameters including historical and future pumping, and temporal variation in recharge distribution and magnitude.

Reference:

Deeds, N., Yan, T., Singh, A., Jones, T., Kelley, V., Knox, P., and Young, S., 2010. Final Report Groundwater Availability Model for the Yegua-Jackson Aquifer, prepared for the Texas Water Development Board, Austin, Texas.