Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

TO: Board Members

THROUGH: Todd Chenoweth, General Counsel
John Dupnik, Deputy Executive Administrator, Water Science & Conservation

FROM: Jeff Walker, Executive Administrator

DATE: September 19, 2019

SUBJECT: Lone Star Groundwater Conservation District appeal of the Executive Administrator's determination that the District's management plan is not administratively complete

ACTION REQUESTED

Deny the appeal of the Lone Star Groundwater Conservation District regarding the determination by the Executive Administrator that the Groundwater Management Plan submitted by the Lone Star Groundwater Conservation District is not administratively complete.

BACKGROUND

Management Plan Approval in the Texas Water Code and TWDB Rules

Each groundwater conservation district in Texas is required to develop a management plan that meets the requirements of Texas Water Code (TWC) § 36.1071. A groundwater conservation district must then review and readopt its management plan with or without revisions at least once every five years. [1] The district must provide the readopted plan to the executive administrator not later than the 60th day after the date on which the plan was readopted.[2] Within 60 days of receipt of a district's management plan, the executive administrator is to approve the district's plan if the plan is

[1] Tex. Water Code § 36.1072(e).
[2] *Id*.

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Jeff Walker, Executive Administrator

administratively complete.[3] The Water Code provides that a management plan is administratively complete when it contains the information required to be submitted under TWC § 36.1071(a) and (e).[4]

The Water Code states that all districts shall "develop a management plan that addresses the following management goals, as applicable… (8) addressing the desired future conditions adopted by the district under TWC § 36.108."[5] Further, the management plan must identify the performance standards and management objectives under which the district will operate to achieve the management goals related to desired future conditions (DFCs); specify, in as much detail as possible, the actions, procedures, performance, and avoidance that are or may be necessary to effect the plan, including specifications and proposed rules; and include estimates of the modeled available groundwater in the district based on the DFCs established under TWC § 36.108.[6]

In addition to meeting these management plan requirements, districts must adopt rules necessary to implement the management plan.[7]

Texas Water Development Board (TWDB) rules repeat these requirements and provide additional details.[8] The rules require the management plan goals to be time-based and quantifiable,[9] and the management goals, performance standards, and management objectives to be consistent with the established DFCs.[10]

Lone Star Groundwater Conservation District Procedural History[11]

Lone Star Groundwater Conservation District (the District) is part of Groundwater Management Area (GMA) 14, which contains five districts that encompass twelve of the nineteen counties in the GMA. Two subsidence districts covering three counties are also within the area of GMA 14.[12] The GMA covers the northern portion of the Gulf Coast Aquifer System, along with the Queen City, Yegua Jackson, Sparta, and Brazos River Alluvium aquifers. The District covers the Gulf Coast Aquifer System in Montgomery County (Attachment 2).

The District submitted its Groundwater Management Plan (Plan) to the TWDB Executive Administrator for administrative completeness review on March 18, 2019.[13] After review of the Plan according to the provisions of TWC §§ 36.1071 and 36.1072, the

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[3] Tex. Water Code § 36.1072(b).
[4] *Id.*
[5] Tex. Water Code § 36.1071(a) (only relevant language included).
[6] Tex. Water Code § 36.1071(e).
[7] Tex. Water Code § 36.1071(f).
[8] 31 Texas Administrative Code § 356.52.
[9] 31 Tex. Admin. Code § 356.51.
[10] 31 Tex. Admin. Code § 356.52(b).
[11] See Attachment 1 for a timeline of relevant events.
[12] The subsidence district representatives act as non-voting members to the GMA.
[13] See District's Appeal Exhibit No. A-33.

Executive Administrator informed the District in a letter dated May 16, 2019 that the Plan was not administratively complete and therefore was not approved. The Executive Administrator cited two reasons for the determination:

1. The Plan does not have specific and time-based management objectives or performance standards that the District will use to achieve the goal of addressing the DFCs adopted under TWC § 36.108 (as required by TWC § 36.1071(a)(8) and 31 Texas Administrative Code (Tex. Admin. Code) § 356.52(a)(1-3)).
2. The Plan does not include an estimate of the modeled available groundwater in the District based on the DFC adopted under TWC § 36.108 (as required by TWC § 36.1071(e)(3)(A) and 31 Tex. Admin. Code § 356.52(a)(5)(A)).

The Executive Administrator also informed the District that it could informally submit a revised management plan prior to its adoption for a "pre-review" of the plan within the 180-day period before the deadline of submitting a corrected plan. The District initiated the pre-review process on May 23, 2019, by submitting a revised Plan, along with the document "Technical Review of 2010 and 2016 Desired Future Conditions Adopted by GMA 14 and Applicable to the Lone Star Groundwater Conservation District."

TWDB staff completed the pre-review of the revised Plan on June 24, 2019.[14] The Pre-Review Recommendation Report prepared by TWDB staff and forwarded to the District identified the following required changes:

- The revised Plan does not have specific and time-based management objectives or performance standards that the District will use to achieve the goal of addressing the DFCs adopted under TWC § 36.108 (as required by TWC § 36.1071(a)(8) and 31 Texas Admin. Code § 356.51 and § 356.52(a)(1-3)). As indicated in the May 16, 2019 letter from Executive Administrator Jeff Walker to the District's General Manager Samantha Reiter, the TWDB considers the DFCs for the District as adopted by district representatives in GMA 14 in 2010 to be the currently active DFCs.

- Section 10.8 describes the District's plans for tracking DFCs after new DFCs are adopted through the joint planning process at some time in the future. Section 7 describes how the DFCs adopted by the District in 2016 were found in a contested case hearing to be no longer reasonable and that the District signed a final order agreeing to this decision. This section further concludes that "…desired future conditions applicable to the District remain unresolved until reasonable desired future conditions are adopted in the current or future round of joint planning." However, DFCs for the District were adopted by district representatives of GMA 14 under TWC § 36.108 in 2010 and, therefore, are now the active and applicable DFCs to be addressed in the plan until district

[14] See District's Appeal Exhibit No. A-38.

representatives in GMA 14 vote to adopt new DFCs, which in turn would need to be adopted by the District.

- Please revise § 10.8 to indicate how the District will address the 2010 DFCs. With changes to § 10.8, please revise § 10.7 so it is not contradictory to § 10.8.

The District, in accordance with the provisions of TWC § 36.1072(f), filed a Notice of Appeal with the TWDB on July 12, 2019, regarding the decision of the Executive Administrator to not approve the Plan it submitted.

DISCUSSION

The Board is asked to consider the Executive Administrator's decision and approve or not approve the District's management plan in accordance with TWC § 36.1072(f).

The Executive Administrator's Authority

The Executive Administrator acted within his authority when he determined that the District's management plan was not administratively complete. As discussed above, the Executive Administrator found the plan incomplete for two reasons:

1) the management plan does not have specific and time-based management objectives or performance standards that the District will use to achieve the goal of addressing the DFCs adopted under TWC § 36.108, and

2) the management plan does not include an estimate of the modeled available groundwater (MAG) in the District based on the DFCs adopted under TWC § 36.108.

These two deficiencies in the District's plan omit elements required by § 36.1071(e) of the Water Code and § 356.51 of the TWDB's rules. The District contends that its management plan satisfies the requirements because the plan contains management goals addressing the DFCs and includes estimates of the associated MAGs with explanations of their applicability. The District's submitted management plan did not address DFCs, and instead stated that "no reasonable DFCs are available for inclusion in the management plan." The Water Code, however, expressly requires that management plans contain goals and objectives consistent with achieving the DFCs of the relevant aquifers as adopted during the joint planning process.[15] The Executive Administrator, therefore, found that the District's plan was deficient and administratively incomplete.

The TWDB agrees with the District that the Executive Administrator can only exercise those powers in Chapter 36 that the Legislature has conferred in clear and express language and cannot add new or additional powers.[16] But, whenever the Legislature

[15] Tex. Water Code § 36.1085.
[16] *Texas Nat. Res. Conservation Com'n v. Lakeshore Util. Co., Inc.*, 164 S.W.3d 368, 377 (Tex. 2005).

expressly confers powers and duties on an agency, it also impliedly intends that the agency have whatever powers are reasonably necessary to fulfill those express powers and duties.[17] In reviewing and approving management plans, the TWDB's Executive Administrator "shall approve the district's plan if the plan is administratively complete" and the plan is administratively complete "when it contains the information required to be submitted under § 36.1071(a) and (e)."[18]

The District argues that the TWDB's statutory role in approving plans is purely ministerial, and that the TWDB's role is simply to check off that the required information is in the management plan. When construing a statute, the primary objective is to ascertain and give effect to the Legislature's intent.[19] An interpretation of a statute cannot lead to absurd results.[20] If we were to take the District's view of the statute to its logical conclusion, the District would be able to submit anything, and, as long as the District claimed that it was the required information, the Executive Administrator would have to approve the management plan. But the District cannot submit nonsense and have an approvable management plan. In fulfilling its role of approving management plans and ensuring compliance with statutory intent, the Executive Administrator has a duty to confirm that the required information is complete, meaningful, and verifiable. Generally, a statute that confers administrative powers is liberally interpreted to carry out the Legislature's intent. While the statute states explicitly that the executive administrator may approve or disapprove a management plan, the ability to provide criteria for making that determination is implied and reasonably necessary to fulfil the executive administrator's statutory duty.

Finally, the Executive Administrator did not exceed his authority by "reinstating lapsed DFCs," as the District contends. The Executive Administrator interprets the applicable statutes to require all management plans to address the DFCs adopted under TWC § 36.108.[21] In this case, the 2010 DFCs are now the only DFCs that could be used to satisfy this requirement. The 2016 DFCs, having failed to survive the DFC appeal, cannot be used. The 2010 DFCs, however, were adopted under the then-existing statute, meeting all requirements, and those DFCs were not appealed. Further, the 2010 DFCs provided the necessary basis for the District's 2013 management plan, which also has not been questioned. Therefore, the adopted 2010 DFCs still apply until new DFCs are adopted.

Addressing the 2010 DFCs in the District's management plan does not yield inconsistent and absurd results, as the District contends. Rather, the inconsistent and absurd results arise from failing to produce a management plan that accomplishes the purposes of such a plan. The Region H Regional Water Planning Group is currently utilizing the MAGs developed using the 2010 DFCs in producing the current regional water plan. If the Plan

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[17] *Id.* at 378.
[18] Tex. Water Code § 36.1072(b).
[19] *TGS-NOPEC Geophysical Co. v. Combs*, 340 S.W.3d 432, 439 (Tex. 2011).
[20] *Id.*
[21] Tex. Water Code § 36.1071(a)(8), (e)(3)(A), 36.1085, and 36.1086.

does not address a DFC, it will be inconsistent with and, therefore, in conflict with the State Water Plan and subject to challenge under TWC § 36.1062(g).

Legislative Intent

The purpose statement for Chapter 36 of the Water Code, governing groundwater conservation districts, states that the legislative intent of that chapter is to "provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence" through the creation of groundwater conservation districts, "the state's preferred method of groundwater management."[22] In furtherance of this purpose, groundwater conservation districts are required to adopt rules to implement the management plan and, as noted above, the management plan is incomplete without addressing the DFCs. Because of this direct relationship between the management plan and district rules, without DFCs, the management plan is incomplete, and the District is unable to craft rules to implement the management plan. Without rules, the District cannot appropriately regulate groundwater production. This inability to regulate does not meet the Legislature's intent of enabling groundwater conservation districts, as the state's preferred method of groundwater management, to manage the state's groundwater resources.

Furthermore, joint groundwater planning and management plans play a significant role in the development of regional water plans. Without an applicable DFC, the Executive Administrator cannot provide a MAG value. With no MAG, the regional water planning groups have no established groundwater availability number (GAM) to look to in recommending water management strategies. The Legislature has provided that regional water plans must be "consistent with the desired future conditions adopted under TWC § 36.108," which emphasizes the fact that these two processes are connected.[23]

The statutes governing the DFC petition process do not provide for the current situation. The statute does not contemplate a situation where a GMA fails to amend a DFC after successful petition of the DFC when a final order has been reached. The statute explicitly provides a process for amending DFCs after a petition but does not provide for an alternative in the interim before the process has been concluded and alternative DFCs have been adopted. The statute assumes that the GMA and its districts will approve and adopt new DFCs when the most recent DFCs have been determined to be no longer reasonable but does not provide a timeline for that approval and adoption. In the absence of new DFCs adopted according to statute, the most recently adopted DFCs that have not been challenged and that were adopted according to statute are the 2010 DFCs. Therefore, not only is it reasonable to rely on the 2010 DFCs until new DFCs have been adopted, the 2010 DFCs must apply as a matter of law.

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[22] Tex. Water Code § 36.0015(b).
[23] Tex. Water Code § 16.053(e)(2-a).

The Executive Administrator's Decision is Reasonable and Technically Supportable

The 2010 DFCs are not the same as the challenged 2016 DFCs, which were found to "be no longer reasonable." In 2010, GMA 14 district representatives used the best available data to identify and propose DFCs, which were not challenged for reasonableness. Issues related to use of best available data and methodology are not relevant with respect to the validity of the 2010 DFCs. Nevertheless, certain technical issues raised in the District's Appeal and in the Technical Review by the District's Consultants and related to this argument are addressed briefly in Attachment 6.

In summary, the 2010 DFCs adopted by GMA 14 and then by the District, as well as the associated MAGs were adopted according to statute and are applicable to the development of a management plan that meets the statutory criteria. These 2010 DFCs are expected to be in effect until the District adopts new DFCs following the statutorily prescribed process.

RECOMMENDATION

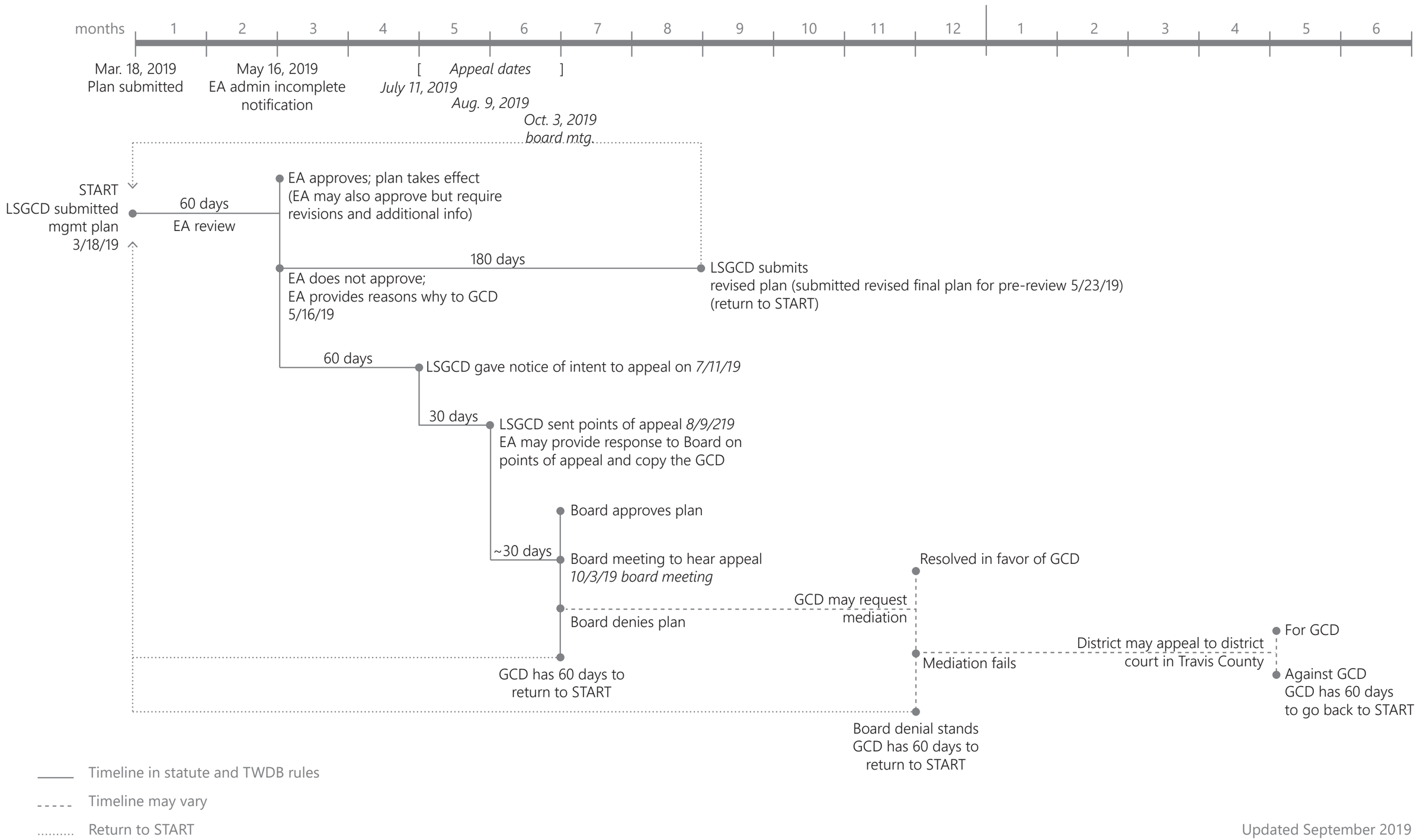
The Executive Administrator recommends that the Board:

> Deny the appeal filed by the Lone Star Groundwater Conservation District regarding the decision of the Executive Administrator that the Groundwater Management Plan submitted by the Lone Star Groundwater Conservation District is not administratively complete.

Attachment(s):
Attachment 1 - Timeline of events
Attachment 2 – Map of GMA 14
Attachment 3 – May 16, 2019 Letter from Jeff Walker to Samantha Reiter
Attachment 4 - Technical Review of 2010 and 2016 Desired Future Conditions by Bob Harden, P.E., and Michael R. Thornhill, P.G. on May 21, 2019
Attachment 5 – Relevant Statutes and Rules
Attachment 6 – Technical Points Raised in the Appeal

Attachment 1

Timeline for Lone Star GCD Management Plan Submittal, Review, and Approval



Updated September 2019

Timeline for Lone Star GCD Management Plan Submittal, Review, and Approval

GCD is created or confirmed.

I. New GCD has three years to submit management plan to EA for review and approval.

- **A.** GCD may review plan annualy, AND
  Must review and readopt at least once every five years.
  - **1.** GCD has 60 days from date of readoption to submit the readopted plan to the EA. (LSGCD adopted plan 3/12/19; did not submit new version for pre-review)
  - **2.** EA has 60 days to approve or not (received LSGCD plan 3/18/19, reviewed and responded with administratively incomplete letter on 5/16/19).
    - **a)** Once approved, the EA:
      - **(1)** May require revisions, AND
      - **(2)** May request additional information to clarify, modify, or supplement the submitted plan.
  - **3.** The plan takes effect on approval.

- **B.** If the EA does not approve the plan:
  - **1.** EA provides reasons in writing to GCD (5/16/19).
  - **2.** GCD has 180 days to submit a revised plan (LSGCD submitted plan for pre-review 5/23/19); OR
  - **3.** GCD has 60 days from date of notice of denial to notify EA in writing of intent to appeal (LSGCD sent notice 7/11/19).
  - **4.** GCD has 30 days from filing notice to address each reason for denial in writing submitted to the EA (LSGCD sent points of appeal 8/9/19).
  - **5.** EA may file a written response to GCD's appeal and provide GCD a copy [deadline determined by internal submittal of board items].
  - **6.** Board hears appeal at first regularly scheduled meeting to occur after 30 days of receipt of the GCD's written appeal (scheduled for 10/3/19 board meeting).
    - **a)** Board may either approve the plan on appeal; OR
    - **b)** Board may deny approval; AND
      - **(1)** GCD may request the matter be mediated.
        - **(a)** Mediation follows the rules of the mediation center.
        - **(b)** If not resolved through mediation, Board denial stands; OR
        - **(c)** GCD may appeal to a district court in Travis County.
  - **7.** District rules continue in effect until:
    - **(a)** All appeals are exhausted, AND
    - **(b)** Final judgement is adverse to GCD.
  - **8.** GCD must go back and revise and readopt plan [and rules] under B.2.

II. An adopted/readopted plan remains in effect until:

- **A.** GCD fails to readopt the plan on time [*the plan expires*];
- **B.** GCD readopts on time but fails to submit on time [*the plan expires*]; OR
- **C.** GCD submits but the EA denies approval and the GCD exhausts its appeals [*the plan expires*].
- **D.** [*GCD must adopt/readopt a new plan under A.1 and has 60 days to submit it (go back to the beginning).*]
- **E.** [*A new five-year cycle begins.*]

Lone Star Groundwater Conservation District (LSGCD) Management Plan Review and Correspondence Timeline

11/6/2017	LSGCD signs final order that 2016 DFCs are no longer reasonable. (Appeal Ex. A-11)
1/31/2018	TWDB sent water budget information (GAM Run 17-023) for LSGCD to use in plan.
5/9/2018	TWDB sent data packet for LSGCD to use in plan. TWDB email instructs LSGCD to use "existing MAG if your new one has not yet been issued by the TWDB" and informs that the plan can be amended with new MAGs at a later date. (Appeal Ex. A-21)
8/13/2018	TWDB sent updated data packet with latest water use survey data for LSGCD to use in plan.
8/24/2018	LSGCD draft plan received by TWDB for pre-review (Original Plan). The Original Plan states that other goals support addressing DFC goal. The plan uses 2016 DFCs until new DFCs are adopted and has management objectives and performance standards that are time-based and specific in addressing the DFCs.
9/7/2018	TWDB sent pre-review recommendation report for Original Plan. No administrative elements missing besides some appendices with information about plan adoption. Some email communication prior to sending recommendation report for Original Plan (Appeal Ex. A-31_2 and A-31_3)
9/18/2018	LSGCD approved to submit draft plan (Courtesy Copy) to TWDB without readoption. (Appeal Ex. A-28)
10/16/2018	LSGCD draft MP (Courtesy Copy) received by TWDB. TWDB staff did not review this copy. (Appeal Exs. A-30, A-31_1)
12/4/2018	LSGCD letter updating TWDB on status regarding plan adoption; TWDB responded 12/14/2018. (Appeal Ex. A-29)
3/18/2019	LSGCD final adopted plan (Final Adopted Plan) received by TWDB. Minutes from LSGCD board meeting when plan was adopted received 4/22/2019 (Appeal Ex. A-33)
5/16/2019	TWDB sent letter that Final Adopted Plan was administratively incomplete. (Appeal Ex. A-36)
5/23/2019	LSGCD sent revised plan (Revised Final Plan) for TWDB pre-review; TWDB responded 6/5/2019. (Appeal Ex. A-37)
6/24/2019	TWDB sent pre-review recommendation report for Revised Final Plan. (Appeal Ex. A-38)
7/11/2019	LSGCD sent notice to appeal TWDB decision; TWDB responded 7/16/2019.
8/9/2019	LSGCD sent points of appeal

Attachment 2

Groundwater Management Area 14

McLennan
Freestone
Limestone
Falls
Leon
Houston
Cherokee
Nacogdoches
San Augustine
Sabine
Angelina
Trinity
Robertson
Madison
Milam
Polk
Tyler
Jasper
Newton
Walker
Brazos
San Jacinto
Grimes
Burleson
Hardin
Montgomery
Lee
Washington
Liberty
Orange
Waller
Jefferson
Fayette
Austin
Harris
Chambers
Colorado
Fort Bend
Galveston
Lavaca
Wharton
Brazoria
DeWitt
Jackson
Matagorda
Victoria
Calhoun

N

MAP LEGEND

- Groundwater Management Area 14
- Counties

Groundwater Conservation Districts

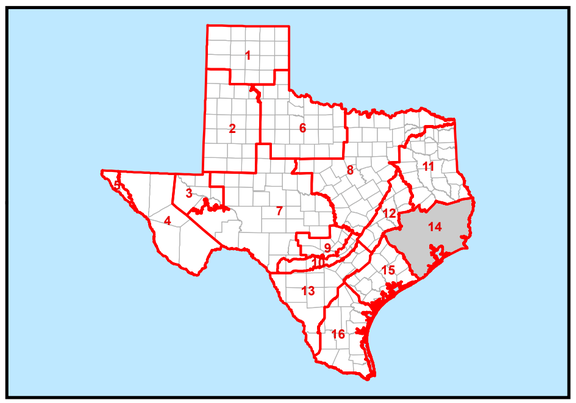
- Bluebonnet GCD
- Brazoria County GCD
- Lone Star GCD
- Lower Trinity GCD
- Southeast Texas GCD

Subsidence Districts

- Harris-Galveston Subsidence District
- Fort Bend Subsidence District

DISCLAIMER
This map was generated by the Texas Water Development Board. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate. Boundaries for groundwater conservation districts are approximate and may not accurately depict legal descriptions.

Updated 8/26/2015



0 5 10 20 30 40 Miles

1 in = 14 miles

Attachment 3

Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

May 16, 2019

Samantha Reiter
Interim General Manager
Lone Star Groundwater Conservation District
655 Conroe Park North Drive
Conroe, Texas 77303

Dear Ms. Reiter:

We have completed our review of the Lone Star Groundwater Conservation District (district) groundwater management plan adopted by the district on March 12, 2019 and received by the Texas Water Development Board (TWDB) on March 18, 2019. We reviewed the plan to determine if it contains the information required under Texas Water Code § 36.1071(a) and (e). Based on our review, the plan is not administratively complete and, therefore, is not approved. This determination and the reason for the action are based on the following two deficiencies:

1. The management plan does not have specific and time-based management objectives or performance standards that the district will use to achieve the goal of addressing the desired future conditions adopted under Texas Water Code § 36.108 (as required by Texas Water Code § 36.1071(a)(8) and 31 Texas Administrative Code § 356.51 and § 356.52(a)(1-3)).

   Section 10.8 of the management plan describes plans for tracking desired future conditions after *new* desired future conditions are adopted through the joint planning process at some time in the future. Section 7 describes how the desired future conditions adopted in 2016 were found in a contested case hearing to be no longer reasonable and that the district signed a final order agreeing to this decision. This section further concludes that "...no reasonable DFCs are available for inclusion in the management plan." While the 2016 desired future conditions were found to be no longer reasonable, desired future conditions *were* adopted by Groundwater Management Area 14 under § 36.108 in 2010 and, therefore, are the desired future conditions to be addressed in the plan. Before resubmitting the plan, please revise this section so that it addresses the desired future conditions as adopted in 2010.

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2. The management plan does not include an estimate of the modeled available groundwater in the district based on the desired future condition adopted under Texas Water Code § 36.108 (as required by Texas Water Code § 36.1071(e)(3)(A) and 31 Texas Administrative Code § 356.52(a)(5)(A)).

   The modeled available groundwater estimates in GAM Run 16-024 MAG are based on desired future conditions adopted in 2016 that were found to be no longer reasonable, as described above. For purposes of the management plan, the desired future conditions adopted by Groundwater Management Area 14 in 2010 are the desired future conditions to be addressed in the plan. As the modeled available groundwater estimates in GAM Run 10-038 MAG are based on the 2010 desired future conditions, they are the modeled available groundwater estimates that should be included in the management plan.

   In Appendix D of the management plan, and where it is mentioned elsewhere in the text, please replace GAM Run 16-024 MAG with GAM Run 10-038 MAG. Once Groundwater Management Area 14 establishes desired future conditions in the upcoming round of joint groundwater planning and the TWDB issues a new modeled available groundwater report, the district can submit an amended groundwater management plan with the new modeled available groundwater estimates.

Should you wish to correct the above deficiencies, you have 180 days to resubmit the plan. To facilitate any final review of a plan, we encourage you to take advantage of our management plan pre-review process prior to submitting an adopted plan. Or you may appeal this decision to the Board by notifying me in writing of your intent to appeal within 60 days of receiving this letter. You can find procedures for an appeal in 31 Texas Administrative Code § 356.55.

Should you have any questions or concerns, please contact Natalie Ballew, Manager of our Groundwater Technical Assistance Program, at 512-463-2779 or natalie.ballew@twdb.texas.gov.

Sincerely,

Jeff Walker for
Executive Administrator

c w/o enc: John T. Dupnik, P.G., Deputy Executive Administrator of Water Science & Conservation
Natalie Ballew, GIT, Groundwater
Stephen Allen, P.G., Groundwater
Abiy Berehe, Texas Commission on Environmental Quality
Peggy Hunka, Texas Commission on Environmental Quality

Technical Review of 2010 and 2016 Desired Future Conditions

Adopted by GMA 14 and Applicable to the Lone Star Groundwater Conservation District

Prepared for:

Lone Star Groundwater Conservation District

Prepared By:

Bob Harden, P.E.
Harden Hydrology, LLC

Michael R. Thornhill, P.G.
Thornhill Group, Inc.

The seal appearing on this document was authorized by Robert Harden, P.E. 79290 on May 21, 2019. Firm Registration Number: F-19082

Executive Summary

The 2010 and 2016 desired future conditions (DFCs) were adopted during the first and second round of joint planning, respectively. Both sets of DFCs were created using essentially the same assumptions, processes, methodologies and procedures. Both the 2010 and 2016 DFCs used political subdivision boundaries as the basis for delineating DFCs. Boundaries that do not conform to discernable differences in current use, or the potential for future use, given the characteristics of the common, subsurface reservoirs in Groundwater Management Area 14 (GMA 14). Just prior to a hearing on the reasonableness of the 2016 DFCs, the prior Lone Star Groundwater Conservation District (Lone Star) Board adopted a change in management philosophy and entered into a settlement agreement stating the DFCs are "no longer reasonable".

The procedural process for adopting both the 2010 and 2016 DFCs included assuming a pumping limit commensurate with the applicable Lone Star District Regulatory Plan. Recently, a District Court Judge in Montgomery County has ruled that key provisions of these Lone Star rules were not unauthorized by the Texas Water Code and accordingly "are, and always have been, "unlawful, void, and unenforceable". Also, adoption of the 2010 DFCs were not required to honor the same statutory technical standards that apply to adoption of the 2016 DFCs. The 2010 DFCs were also developed using a groundwater model that is no longer the official State groundwater availability model, and the Houston Area Groundwater Model is the official State groundwater availability model and a key component of the best available science for GMA 14. Yet, statute requires that groundwater districts adopt rules using the best available science, and achieve DFCs through enforcement of such rules.

Because of the strong similarity between the 2016 DFCs and 2010 DFCs, the unreasonableness determination for the 2016 DFCs, the District Court ruling striking key provisions of Lone Star rules, and the requirement of Lone Star to achieve DFCs through enforcement of rules adopted using the best available science, there exists an unprecedented regulatory situation for Lone Star and a conundrum for re-adoption of the Lone Star management plan using the 2010 DFCs. Because the 2010 and 2016 DFCs mainly represent changes in artesian pressure at a time many decades into the future, there is ample time and opportunity for GMA 14 to adopt new third round DFCs that comply with the Lone Star regulatory challenges, and for Lone Star to adopt rules and enforce those rules to achieve DFCs that are to apply many decades into the future.

Introduction

The first round of joint planning conducted by GMA 14 resulted in the first set of DFCS applicable to Lone Star. Subsequently, the second round of joint planning adopted the second set of DFCs. In this report, the first round and second round DFCs are referred to as 2010 DFCs and 2016 DFCs, respectively.

The purpose of this report is to provide technical review of the characteristics of the 2016 and 2010 DFCs as they might apply in the re-adoption with revisions of the Lone Star management plan. By letter dated May 16, 2019, the Texas Water Development Board (TWDB) advised Lone Star that the DFCs that apply to the District for purposes of determining the new Lone Star plan administratively complete are the 2010 DFCs. The 2010 DFCs were superseded and replaced by the 2016 DFCs upon adoption, and therefore, only exist for historical purposes. Assuming that a superseded DFC can legally be revived, doing so for management purposes raises numerous questions.

The following report discusses the concerns, questions and complicating factors of including the superseded 2010 DFCs in the proposed update to the Lone Star management plan.

Both 2010 and 2016 DFCs Were Adopted Using Same Assumptive Procedures

Both sets of DFCs were formed by first assuming future groundwater availability equals demands in the State Water Plan, or in the case of the subsidence districts the planned pumping commensurate with their regulatory plans. Then, the assumed or prescribed amount of groundwater pumping was placed into a groundwater availability model, and the resulting change in piezometric head (water levels in wells) was averaged and tabulated by county to arrive at the DFCs. This method of calculating DFCs is documented in the meeting minutes for the June 26, 2013 GMA 14 joint planning meeting.

However, DFCs are statutorily defined as having both planning (i.e., GMA joint planning process to determine a MAG for formulating the State Water Plan) and regulatory (i.e., District management plans and rules components). Regulatory work efforts require a higher level of effort to properly consider conservation, meeting the needs of the State and recognition of constitutionally protected private property rights. For instance, regional water planning groups through the regional water planning process have often defined groundwater availability as only that groundwater required to meet local demands independent of the reservoir capacity to produce groundwater. Therefore, export of groundwater from a county has been discounted as infeasible and ignored in the water availability inventory of the State. Then and as happened in GMA 14, the groundwater districts use the past supplied groundwater availability demands from the State Water Plan to “reverse-engineer”, through inverse modeling, to set the DFCs to be used in joint planning. However, it is clear in statute and law that a groundwater conservation district cannot discriminate against municipal export, and each owner of groundwater is entitled to an opportunity to recover his/her fair share. If an abundance of groundwater is present in a rural

area, then rationally and scientifically this groundwater would be available for municipal export supplies, assuming economic viability. By ignoring potential export of groundwater supplies, and not recognizing the rights of groundwater owners to utilize their groundwater, a truly effective and meaningful regional water planning process is crippled, and regulatory challenges quickly arise.

Both 2010 and 2016 DFCs Were Adopted for Political Areas

Both the 2010 and 2016 DFCs were adopted for political areas and not areas relating to common use or characteristics, including potential for future use of a subsurface reservoir. The suitability of using political boundaries for adopting DFCs was addressed by members of the TWDB in the first round of joint planning as outlined in the following letter:

TEXAS WATER DEVELOPMENT BOARD

James E. Herring, *Chairman*
Lewis H. McMahan, *Member*
Edward G. Vaughan, *Member*

J. Kevin Ward
Executive Administrator

Jack Hunt, *Vice Chairman*
Thomas Weir Labatt III, *Member*
Joe M. Crutcher, *Member*

TO: Board Members

THROUGH: Robert E. Mace, Deputy Executive Administrator, Water Science and Conservation

FROM: William R. Hutchison, Director, Groundwater Resources Division
Kenneth L. Petersen, General Counsel

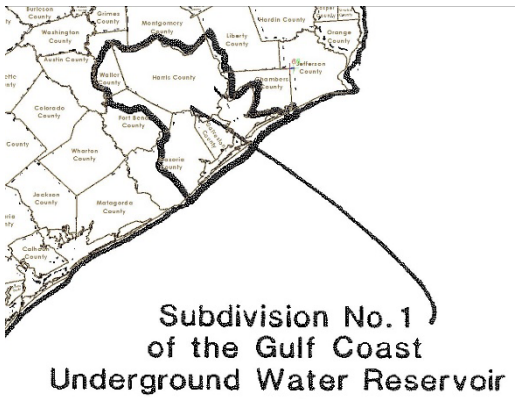
DATE: March 10, 2010

SUBJECT: Briefing and discussion on: (a) status of joint planning in groundwater management areas; and (b) use of "geographic areas" in establishing desired future conditions.

The authors state:

> The question has been presented whether groundwater conservation districts within a groundwater management area (GMA) may delineate different "geographic areas" within the GMA by use of county (or other political subdivision) boundaries. Staff believes this approach is legally defensible provided the districts are using the political subdivision boundaries to locate discernible and substantial differences in uses or conditions within the GMA and not for any other purposes. It should be emphasized that employing geographic areas that are not based on clear and substantial differences in uses or aquifer conditions is not supportable, regardless of how those geographic areas are drawn.

In the 2016 Explanatory Report prepared by GMA 14, there is no study, conclusion, or documentation as to why county boundaries were chosen as the areas for calculating the DFCs. Conversely, in 1974 the State of Texas identified an area of the Northern Gulf Coast aquifer by considering the patterns of current use, the potential for future use, and the reservoir characteristics.



This area included all of Galveston and Harris Counties, and portions of Brazoria, Fort Bend, and Waller Counties. The area was designated as Subdivision No.1 of the Gulf Coast Underground Water Reservoir.

Historically, the State of Texas has used such designations to identify the sub-areas of regional aquifers most suitable for proper management of the reservoir. We believe such designations are functionally equivalent to the Texas Supreme Court's wording of "common, subsurface reservoir" when it stated that "[o]ne purpose of groundwater regulation is to afford every owner of water in a common, subsurface reservoir a fair share." *Edwards Aquifer Auth. v. Day,* 369 S.W.3d 814 (Tex. 2012).

Increased Statutory Requirements between 2010 vs. 2016 DFCs.

The initial round of joint planning was found to be technically lacking and inadequate by the Texas Legislature, primarily regarding the need for additional scientific and technical considerations in deriving and adopting DFCs. SB 660 was passed in 2011 and for the first time required the second and subsequent rounds of joint planning to consider nine statutory factors, and to produce an explanatory report documenting the considerations. The nine factors are listed in TWC Chapter 36.108(d):

> Before voting on the proposed desired future conditions of the aquifers under Subsection (d-2), the districts shall consider:
>
> (1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;
>
> (2) the water supply needs and water management strategies included in the state water plan;
>
> (3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;
>
> (4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;
>
> (5) the impact on subsidence;

(6) socioeconomic impacts reasonably expected to occur;

(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;

(8) the feasibility of achieving the desired future condition; and

(9) any other information relevant to the specific desired future conditions.

While the 2016 DFCs were subject to these statutory requirements, the 2010 DFCs were not. In addition, an explanatory report was produced for adoption of the 2016 DFCs.

Change in 2016 DFC Petition Process

Following the 2010 DFC petition process, the Sunset Review Board authored a report to the Texas Legislature recommending the DFC petition process be modified to include a contested case process. As the report stated, DFCs are regulatory, and accordingly those potentially affected by the adoption and regulation to achieve DFCs deserve due process procedures. The TWDB produced its own report recommending changes because the TWDB is not a regulatory agency.

In 2015, HB 200 modified the DFC petition process to require a SOAH hearing process, and under this process the Lone Star 2016 DFCs were the subject of two petitions claiming the DFCs were unreasonable. Eventually, the DFCs were found to be "no longer reasonable" by SOAH Judge Casey Bell on November 6, 2017. One primary reason the DFCs were ruled unreasonable[1] was because, on October 10, 2017, the prior Lone Star Board adopted a new management strategy that allows for increased production and measured aquifer level declines over time.

The 2010 DFCs are based on the same management philosophy and geographic area delineation as the unreasonable 2016 DFCs. Today, no remedy is afforded to the petitioners to challenge the reasonableness of the 2010 DFCs. This raises questions over the legitimacy of enforcing rules and regulations to achieve the 2010 DFCs, when these DFCs represent the same thinking as the unreasonable 2016 DFCs.

Final Ruling of Conroe, Quadvest L.P, et al. vs. LSGCD Suit

On May 17, 2019, District Judge Lamar McCorkle issued a final order in the City of Conroe, Quadvest L.P. et al suit against Lone Star. The order states that several fundamental rules associated with the District's Regulatory Plan were adopted by the District "without legal authority, and consequently are, and always have been, unlawful, void, and unenforceable." The

[1] The practical result of determining the 2016 DFCs "were no longer reasonable" is that the DFCs were effectively unreasonable. For this reason and ease of reference, the 2016 DFCs are hereinafter referred to as unreasonable.

assumed pumping used to back-calculate both the 2010 and 2016 DFCs was based on the rules addressed in this suit.

Application of Best Available Science

The 2010 DFCs were calculated by assuming a certain pumping limit, and then placing the pumping amount in the original Northern Gulf Coast Groundwater Availability Model. This model has been superseded by the Houston Area Groundwater Model (HAGM) which is the best available science used in the 2016 DFC process and the current third round of joint planning activity of GMA 14. In fact, utilizing the same pumping distribution and numbers as reported as the District's MAG, the modeled drawdown (i.e., DFCs) varied substantially simply based on the change from the previous model to the HAGM. Therefore, the 2010 DFCs are not based on the best available science. Texas Water Code Chapter 36.0015 requires groundwater districts to use the best available science "in the conservation and development of groundwater through rules developed, adopted and promulgated by a district in accordance with provisions of this chapter."

2010 and 2016 DFCs Time-Based Performance Standards

Both the 2010 and 2016 DFCs were determined by placing assumed pumping into a groundwater availability model, and then averaging changes in piezometric head by county. The changes in piezometric head are often referred to as "drawdown", or changes in water levels in wells. Changes in water levels in wells are due to either: 1) changes in water table pore storage, or 2) changes in artesian pressure. For many aquifers, changes in water table storage are slow because the relationship between pumping and recharge is very small compared to the amount of water in storage. Changes in artesian pressure can occur relatively quickly and over large spatial extents. The changes are more related to near-term pumping rate and aquifer transmissivity.

Both the 2010 and 2016 DFCs are dominated by changes in pressure represented over a long-time performance standard. The 2010 DFCs represent the change from 2016 to 2060. Countless pumping scenarios could occur over this timeframe and the DFCs be achieved in 2060, including pumping in excess of modeled available groundwater for extended periods. Additionally, State Water Planning has introduced a new concept called "MAG Peaking Factors" that contemplates producing more water than MAG for water planning purposes in meeting future State water demands.

Therefore, it is reasonable that ongoing GMA 14 activities to adopt new DFCs for Lone Star will occur in ample time for Lone Star to adopt new rules and enforce these rules to meet the performance standards for a time-based standard that is many decades into the future.

Legislative Opportunity

Sections 36.108, 36.1083, and 36.10835 of the Texas Water Code do not fully address any time-based requirements that address adoption of new DFCs for DFCs that are ruled unreasonable.

Both 36.1083 and 36.10835 instruct groundwater districts to follow procedures in 36.108 for adopting new DFCs. Section 36.108 does describe the process for adopting DFCs, but it says nothing specific to requirements for DFCs determined to be unreasonable including no time limit by which the GMA must rectify the unreasonable DFC. If groundwater districts in a GMA can just pass on the requirement to adopt new DFCs to the next round of joint planning, then hypothetically unreasonable DFC after unreasonable DFC could be adopted without any resolution.

We are also unaware of any instruction in TWC Chapter 36 or Texas Administrative Code 356 to guide the TWDB in the requirements of management plans for groundwater districts whose DFCs have been found to be unreasonable.

There appears to be a legislative opportunity to address what specific steps a GMA must take to adopt new DFCs when a petition determines DFCs are unreasonable, and what should the TWDB stipulate for re-adoption of management plans where the groundwater district DFCs are ruled unreasonable.

Summary

There is striking similarity in assumptions, processes, methodologies, and procedures used for adopting both the 2010 and 2016 DFCs. The 2016 DFCs were held to higher statutory standards then existed at the time the 2010 DFCs were adopted. The 2016 DFCs have been ruled as no longer reasonable, and the prior Lone Star Board adopted a change in management strategy for reservoirs of the Gulf Coast aquifer in Montgomery County. GMA 14 declined to address new DFCs for Lone Star to replace the 2016 DFCs, and instead voted to adopt new DFCs commensurate with the unreasonable DFC determination during the third round of joint planning. Subsequently, Lone Star submitted a new management plan for review by the TWDB with revisions in management philosophy and including references to the status of 2016 DFCs. Upon review of the submitted Lone Star management plan, the TWDB determined the plan to be administratively incomplete, and advised Lone Star the DFCs that are to be included in the management plan are the 2010 DFCs.

This experience has illuminated deficiencies in statute that are needed to provide guidance to groundwater management areas, groundwater districts, and the Texas Water Development Board. Fortunately, the historic DFCs adopted by GMA 14 for Lone Star are time-based standards that must be achieved many decades into the future. Due to their nature, mainly changes in artesian pressure, there is ample time for GMA 14 to adopt new DFCs and for Lone Star to adopt new rules to achieve these standards.

Water Code

Title 2. Water Administration

Subtitle E. Groundwater Management

Chapter 36. Groundwater Conservation Districts

Subchapter D. Powers and Duties

§ 36.0015. Purpose

(a) In this section, "best available science" means conclusions that are logically and reasonably derived using statistical or quantitative data, techniques, analyses, and studies that are publicly available to reviewing scientists and can be employed to address a specific scientific question.

(b) In order to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution, groundwater conservation districts may be created as provided by this chapter. Groundwater conservation districts created as provided by this chapter are the state's preferred method of groundwater management in order to protect property rights, balance the conservation and development of groundwater to meet the needs of this state, and use the best available science in the conservation and development of groundwater through rules developed, adopted, and promulgated by a district in accordance with the provisions of this chapter.

§ 36.1071. Management Plan

(a) Following notice and hearing, the district shall, in coordination with surface water management entities on a regional basis, develop a management plan that addresses the following management goals, as applicable:

(1) providing the most efficient use of groundwater;

(2) controlling and preventing waste of groundwater;

(3) controlling and preventing subsidence;

(4) addressing conjunctive surface water management issues;

(5) addressing natural resource issues;

(6) addressing drought conditions;

(7) addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective; and

(8) addressing the desired future conditions adopted by the district under Section 36.108.

(b) The management plan, or any amendments to the plan, shall be developed using the district's best available data and forwarded to the regional water planning group for use in their planning process.

(c) The commission and the Texas Water Development Board shall provide technical assistance to a district in the development of the management plan required under Subsection (a) which may include, if requested by the district, a preliminary review and comment on the plan prior to final approval by the board. If such review and comment by

the commission is requested, the commission shall provide comment not later than 30 days from the date the request is received.

(d) The commission shall provide technical assistance to a district during its initial operational phase. If requested by a district, the Texas Water Development Board shall train the district on basic data collection methodology and provide technical assistance to districts.

(e) In the management plan described under Subsection (a), the district shall:

(1) identify the performance standards and management objectives under which the district will operate to achieve the management goals identified under Subsection (a);

(2) specify, in as much detail as possible, the actions, procedures, performance, and avoidance that are or may be necessary to effect the plan, including specifications and proposed rules;

(3) include estimates of the following:

(A) modeled available groundwater in the district based on the desired future condition established under Section 36.108;

(B) the amount of groundwater being used within the district on an annual basis;

(C) the annual amount of recharge from precipitation, if any, to the groundwater resources within the district;

(D) for each aquifer, the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers;

(E) the annual volume of flow into and out of the district within each aquifer and between aquifers in the district, if a groundwater availability model is available;

(F) the projected surface water supply in the district according to the most recently adopted state water plan; and

(G) the projected total demand for water in the district according to the most recently adopted state water plan; and

(4) consider the water supply needs and water management strategies included in the adopted state water plan.

(f) The district shall adopt rules necessary to implement the management plan. Prior to the development of the management plan and its approval under Section 36.1072, the district may not adopt rules other than rules pertaining to the registration and interim permitting of new and existing wells and rules governing spacing and procedure before the district's board; however, the district may not adopt any rules limiting the production of wells, except rules requiring that groundwater produced from a well be put to a nonwasteful, beneficial use. The district may accept applications for permits under Section 36.113, provided the district does not act on any such application until the district's management plan is approved as provided in Section 36.1072.

(g) The district shall adopt amendments to the management plan as necessary. Amendments to the management plan shall be adopted after notice and hearing and shall otherwise comply with the requirements of this section.

(h) In developing its management plan, the district shall use the groundwater availability modeling information provided by the executive administrator together with any available

site-specific information that has been provided by the district to the executive administrator for review and comment before being used in the plan.

§ 36.1072. Texas Water Development Board Review and Approval of Management Plan

(a) In this section, "development board" means the Texas Water Development Board.

(a-1) A district shall, not later than three years after the creation of the district or, if the district required confirmation, not later than three years after the election confirming the district's creation, submit the management plan required under Section 36.1071 to the executive administrator for review and approval.

(b) Within 60 days of receipt of a district's management plan adopted under Section 36.1071, readopted under Subsection (e) or (g) of this section, or amended under Section 36.1073, the executive administrator shall approve the district's plan if the plan is administratively complete. A management plan is administratively complete when it contains the information required to be submitted under Section 36.1071(a) and (e). The executive administrator may determine whether conditions justify waiver of the requirements under Section 36.1071(e)(4).

(c) Once the executive administrator has approved a district's management plan:

> **(1)** the executive administrator may not revoke but may require revisions to the approved management plan as provided by Subsection (g); and
>
> **(2)** the executive administrator may request additional information from the district if the information is necessary to clarify, modify, or supplement previously submitted material, but a request for additional information does not render the management plan unapproved.

(d) A management plan takes effect on approval by the executive administrator or, if appealed, on approval by the development board.

(e) The district may review the plan annually and must review and readopt the plan with or without revisions at least once every five years. The district shall provide the readopted plan to the executive administrator not later than the 60th day after the date on which the plan was readopted. Approval of the preceding management plan remains in effect until:

> **(1)** the district fails to timely readopt a management plan;
>
> **(2)** the district fails to timely submit the district's readopted management plan to the executive administrator; or
>
> **(3)** the executive administrator determines that the readopted management plan does not meet the requirements for approval, and the district has exhausted all appeals to the Texas Water Development Board or appropriate court.

(f) If the executive administrator does not approve the district's management plan, the executive administrator shall provide to the district, in writing, the reasons for the action. Not later than the 180th day after the date a district receives notice that its management plan has not been approved, the district may submit a revised management plan for review and approval. The executive administrator's decision may be appealed to the development board. If the development board decides not to approve the district's management plan on appeal, the district may request that the conflict be mediated. The district and the board may seek the assistance of the Center for Public Policy Dispute Resolution at The University of Texas School of Law or an alternative dispute resolution system established under Chapter 152, Civil Practice and Remedies Code, in obtaining a qualified impartial third

party to mediate the conflict. The cost of the mediation services must be specified in the agreement between the parties and the Center for Public Policy Dispute Resolution or the alternative dispute resolution system. If the parties do not resolve the conflict through mediation, the decision of the development board not to approve the district's management plan may be appealed to a district court in Travis County. Costs for the appeal shall be set by the court hearing the appeal. An appeal under this subsection is by trial de novo. The commission shall not take enforcement action against a district under Subchapter I[1]until the latest of the expiration of the 180-day period, the date the development board has taken final action withholding approval of a revised management plan, the date the mediation is completed, or the date a final judgment upholding the board's decision is entered by a district court. An enforcement action may not be taken against a district by the commission or the state auditor under Subchapter I because the district's management plan and the approved regional water plan are in conflict while the parties are attempting to resolve the conflict before the development board, in mediation, or in court. Rules of the district continue in full force and effect until all appeals under this subsection have been exhausted and the final judgment is adverse to the district.

(g) A person with a legally defined interest in groundwater in a district, or the regional water planning group, may file a petition with the development board stating that a conflict requiring resolution may exist between the district's approved management plan developed under Section 36.1071 and the state water plan. If a conflict exists, the development board shall provide technical assistance to and facilitate coordination between the involved person or regional water planning group and the district to resolve the conflict. Not later than the 45th day after the date the person or the regional water planning group files a petition with the development board, if the conflict has not been resolved, the district and the involved person or regional planning group may mediate the conflict. The district and the involved person or regional planning group may seek the assistance of the Center for Public Policy Dispute Resolution at The University of Texas School of Law or an alternative dispute resolution system established under Chapter 152, Civil Practice and Remedies Code, in obtaining a qualified impartial third party to mediate the conflict. The cost of the mediation services must be specified in the agreement between the parties and the Center for Public Policy Dispute Resolution or the alternative dispute resolution system. If the district and the involved person or regional planning group cannot resolve the conflict through mediation, the development board shall resolve the conflict not later than the 60th day after the date the mediation is completed. The development board action under this provision may be consolidated, at the option of the board, with related action under Section 16.053(p). If the development board determines that resolution of the conflict requires a revision of the approved management plan, the development board shall provide information to the district. The district shall prepare any revisions to the plan based on the information provided by the development board and shall hold, after notice, at least one public hearing at some central location within the district. The district shall consider all public and development board comments, prepare, revise, and adopt its management plan, and submit the revised management plan to the development board for approval. On the request of the district or the regional water planning group, the development board shall include discussion of the conflict and its resolution in the state water plan that the development board provides to the governor, the lieutenant governor, and the speaker of the house of representatives under Section 16.051(e). If the

groundwater conservation district disagrees with the decision of the development board under this subsection, the district may appeal the decision to a district court in Travis County. Costs for the appeal shall be set by the court hearing the appeal. An appeal under this subsection is by trial de novo.

§ 36.108. Joint Planning in Management Area

(a) In this section:

(1) "Development board" means the Texas Water Development Board.

(2) "District representative" means the presiding officer or the presiding officer's designee for any district located wholly or partly in the management area.

(b) If two or more districts are located within the boundaries of the same management area, each district shall forward a copy of that district's new or revised management plan to the other districts in the management area. The boards of the districts shall consider the plans individually and shall compare them to other management plans then in force in the management area.

(c) The district representatives shall meet at least annually to conduct joint planning with the other districts in the management area and to review the management plans, the accomplishments of the management area, and proposals to adopt new or amend existing desired future conditions. In reviewing the management plans, the districts shall consider:

(1) the goals of each management plan and its impact on planning throughout the management area;

(2) the effectiveness of the measures established by each district's management plan for conserving and protecting groundwater and preventing waste, and the effectiveness of these measures in the management area generally;

(3) any other matters that the boards consider relevant to the protection and conservation of groundwater and the prevention of waste in the management area; and

(4) the degree to which each management plan achieves the desired future conditions established during the joint planning process.

(d) Not later than May 1, 2021, and every five years thereafter, the districts shall consider groundwater availability models and other data or information for the management area and shall propose for adoption desired future conditions for the relevant aquifers within the management area. Before voting on the proposed desired future conditions of the aquifers under Subsection (d-2), the districts shall consider:

(1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;

(2) the water supply needs and water management strategies included in the state water plan;

(3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;

(4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;

(5) the impact on subsidence;

(6) socioeconomic impacts reasonably expected to occur;

(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;

(8) the feasibility of achieving the desired future condition; and

(9) any other information relevant to the specific desired future conditions.

(d-1) After considering and documenting the factors described by Subsection (d) and other relevant scientific and hydrogeological data, the 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 the management area; or

(2) each geographic area overlying an aquifer in whole or in part or subdivision of an aquifer within the boundaries of the management area.

(d-2) The desired future conditions proposed under Subsection (d) must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area. This subsection does not prohibit the establishment of desired future conditions that provide for the reasonable long-term management of groundwater resources consistent with the management goals under Section 36.1071(a). The desired future conditions proposed under Subsection (d) must be approved by a two-thirds vote of all the district representatives for distribution to the districts in the management area. A period of not less than 90 days for public comments begins on the day the proposed desired future conditions are mailed to the districts. During the public comment period and after posting notice as required by Section 36.063, each district shall hold a public hearing on any proposed desired future conditions relevant to that district. During the public comment period, the district shall make available in its office a copy of the proposed desired future conditions and any supporting materials, such as the documentation of factors considered under Subsection (d) and groundwater availability model run results. After the close of the public comment period, the district shall compile for consideration at the next joint planning meeting a summary of relevant comments received, any suggested revisions to the proposed desired future conditions, and the basis for the revisions.

(d-3) After all the districts have submitted their district summaries, the district representatives shall reconvene to review the reports, consider any district's suggested revisions to the proposed desired future conditions, and finally adopt the desired future conditions for the management area. The desired future conditions must be approved by a resolution adopted by a two-thirds vote of all the district representatives not later than January 5, 2022. Subsequent desired future conditions must be proposed and finally adopted by the district representatives before the end of each successive five-year period after that date. The district representatives shall produce a desired future conditions explanatory report for the management area and submit to the development board and each district in the management area proof that notice was posted for the joint planning meeting, a copy of the resolution, and a copy of the explanatory report. The report must:

(1) identify each desired future condition;

(2) provide the policy and technical justifications for each desired future condition;

(3) include documentation that the factors under Subsection (d) were considered by the districts and a discussion of how the adopted desired future conditions impact each factor;
(4) list other desired future condition options considered, if any, and the reasons why those options were not adopted; and
(5) discuss reasons why recommendations made by advisory committees and relevant public comments received by the districts were or were not incorporated into the desired future conditions.

(d-4) After a district receives notification from the Texas Water Development Board that the desired future conditions resolution and explanatory report under Subsection (d-3) are administratively complete, the district shall adopt the applicable desired future conditions in the resolution and report.

(e) Except as provided by this section, a joint meeting under this section must be held in accordance with Chapter 551, Government Code. Each district shall comply with Chapter 552, Government Code. The district representatives may elect one district to be responsible for providing the notice of a joint meeting that this section would otherwise require of each district in the management area. Notice of a joint meeting must be provided at least 10 days before the date of the meeting by:
(1) providing notice to the secretary of state;
(2) providing notice to the county clerk of each county located wholly or partly in a district that is located wholly or partly in the management area; and
(3) posting notice at a place readily accessible to the public at the district office of each district located wholly or partly in the management area.

(e-1) The secretary of state and the county clerk of each county described by Subsection (e) shall post notice of the meeting in the manner provided by Section 551.053, Government Code.

(e-2) Notice of a joint meeting must include:
(1) the date, time, and location of the meeting;
(2) a summary of any action proposed to be taken;
(3) the name of each district located wholly or partly in the management area; and
(4) the name, telephone number, and address of one or more persons to whom questions, requests for additional information, or comments may be submitted.

(e-3) The failure or refusal of one or more districts to post notice for a joint meeting under Subsection (e)(3) does not invalidate an action taken at the joint meeting.

§ 36.1085. Management Plan Goals and Objectives

Each district in the management area shall ensure that its management plan contains goals and objectives consistent with achieving the desired future conditions of the relevant aquifers as adopted during the joint planning process.

Water Code

Title 2. Water Administration

Subtitle C. Water Development

Chapter 16. Provisions Generally Applicable to Water Development

Subchapter C. Planning

§ 16.053. Regional Water Plans

(e) Each regional water planning group shall submit to the development board a regional water plan that:

(2-a) is consistent with the desired future conditions adopted under Section 36.108 for the relevant aquifers located in the regional water planning area as of the most recent deadline for the board to adopt the state water plan under Section 16.051 or, at the option of the regional water planning group, established subsequent to the adoption of the most recent plan; provided, however, that if no groundwater conservation district exists within the area of the regional water planning group, the regional water planning group shall determine the supply of groundwater for regional planning purposes; the Texas Water Development Board shall review and approve, prior to inclusion in the regional water plan, that the groundwater supply for the regional planning group without a groundwater conservation district in its area is physically compatible, using the board's groundwater availability models, with the desired future conditions adopted under Section 36.108 for the relevant aquifers in the groundwater management area that are regulated by groundwater conservation districts;

Title 31. Natural Resources and Conservation

Part 10. Texas Water Development Board

Chapter 356. Groundwater Management

Subchapter E. Groundwater Management Plan Approval

§ 356.51. Required Management Plan

In accordance with Texas Water Code §§ 36.1071 (including coordination with surface water management entities on a regional basis), 36.1072, and 36.1085, a district shall develop and submit to the executive administrator a management plan that meets the requirements of § 356.52 of this subchapter (relating to Required Content of Management Plan). The management plan goals must be time-based and quantifiable.

§ 356.52. Required Content of Management Plan

(a) A management plan shall contain, unless explained as not applicable, the following elements:

(1) Management goals:

(A) providing the most efficient use of groundwater;

(B) controlling and preventing waste of groundwater;

(C) controlling and preventing subsidence;

(D) addressing conjunctive surface water management issues;

(E) addressing natural resource issues which impact the use and availability of groundwater, and which are impacted by the use of groundwater;
(F) addressing drought conditions;
(G) addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement and brush control, where appropriate and cost-effective; and
(H) addressing the desired future conditions established pursuant to Texas Water Code § 36.108;

(2) Management objectives that the district will use to achieve the management goals in paragraph (1) of this subsection. Management objectives are specific and time-based statements of future outcomes, each linked to a management goal. Each future outcome must be the result of actions that can be taken by the district during the five years following the effective date of the adopted management plan;
(3) Performance standards for each management objective. Performance standards are indicators or measures used to evaluate the effectiveness and efficiency of district activities. Evaluation of the effectiveness of district activities measures the performance of the district. Evaluation of the efficiency of district activities measures how well district resources are used to produce an output, such as the amount of resources devoted for each management action;
(4) Details of how the district will manage groundwater supplies in the district, including a methodology by which the district will track its progress in achieving its management goals. At least one goal must be tracked on an annual basis; however, other goals may be defined and tracked over a longer time period as appropriate; and
(5) Estimates of the following:

(A) modeled available groundwater in the district as provided by the executive administrator based on the desired future condition established under Texas Water Code § 36.108;
(B) the amount of groundwater being used within the district on an annual basis taken from either the water use survey data provided by the executive administrator or the district's own estimate;
(C) the annual amount of recharge from precipitation, if any, to the groundwater resources within the district as provided by the executive administrator;
(D) for each aquifer, the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers as provided by the executive administrator;
(E) the annual volume of flow into and out of the district within each aquifer and between aquifers in the district, if a groundwater availability model is available from the executive administrator;
(F) the projected surface water supply in the district according to the most recently adopted state water plan; and
(G) the projected water demand for water in the district according to the most recently adopted state water plan.

(b) The management goals, performance standards and management objectives required in subsection (a)(1), (2), and (3) of this section must be consistent with the established desired future conditions of the district's groundwater management area(s).
(c) Each district must use the groundwater availability modeling information provided by the executive administrator in conjunction with available site-specific information provided by the district when developing the estimates required in subsection (a)(5) of this section.

Attachment 6

Technical Points Raised in the Appeal and the Technical Review of the 2010 and 2016 Desired Future Conditions.

The following paragraphs address key technical issues identified within the draft Plan and also by consultants for the District.[1] These technical issues raised by the consultants for the District are not germane to the central question of the administrative completeness of the Plan but are addressed here as supplemental information related to the matter. The bulleted headings identify contentions made by the District.

- *"Both 2010 and 2016 DFCs were adopted using the same assumptive procedures."*[2]

The 2010 and 2016 DFCs were adopted according to applicable statutory provisions, in public meetings, and considering regional water planning and district inputs with respect to current and planned groundwater pumping. These processes and similar constraints were consistently used by all GMAs throughout the state. In addition, this was a required "factor" documented in the Explanatory Report for the 2016 DFCs. In addition, other technical inputs also contributed to both sets of DFCs. Furthermore, District representatives in GMA 14 used best available science (built into the GAMs) in accordance with statutory procedures as documented in minutes of the public meetings and in the 2016 Explanatory Report. The Explanatory Report for the 2016 DFCs records a much more detailed process consistent with statutory changes made after adoption of the 2010 DFCs. While the consultants may not agree with the processes and technical analyses employed by the district representatives, the representatives exercised their duties consistent with direction from their respective local boards.

- *"Application of best available science."*[3]

The state's GAMs are regional, aquifer-based models developed by recognized experts in geology, hydrogeology, and hydrology, with detailed peer review by experts from academia, consulting firms, and federal and state agencies. These approaches ensure that the best available science is applied to policy decisions related to DFCs and

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[1] "Technical Review of 2010 and 2016 Desired Future Conditions Adopted by GMA 14 and Applicable to the Lone Star Groundwater Conservation District" prepared for the Lone Star Groundwater Conservation District by Bob Harden, P.E., and Michael R. Thornhill, P.G. on May 21, 2019, attached as Attachment 4.

[2] *Id.*

[3] "Technical Review of 2010 Desired Future Conditions for Purposes of Inclusion into Lone Star Groundwater Conservations District's 2019 Re-adoption of Management Plan" prepared for Lone Star Groundwater Conservation District by Bob Harden, P.E., and Michael R. Thornhill, P.G. on August 8, 2019.

MAGs. GAMs are periodically updated to reflect improvements in computer software code and additional monitoring data and calibrated to incorporate changing patterns in groundwater pumping and usage. In 2013, the Northern Gulf Coast Aquifer GAM that was used to develop MAGs based on the 2010 DFCs was updated by the U.S. Geological Survey as the Houston Area Groundwater Model (HAGM) and approved by the Executive Administrator for the 2016 joint planning activities. The fundamental features of the two GAM versions were similar, but the later version included updates of the computer software code, better application of subsidence-related computations, and recalibration using the most recent water-level data. Other improvements were related to the refinement of the Jasper Aquifer layer data as well as input of more recent groundwater pumping information. The GAM did not fundamentally change such that the earlier version was deemed incorrect or insufficient for its intended purpose. Therefore, it is not accurate to claim that the best available science at the time was not considered or employed in developing the 2010 or 2016 DFCs.

- *"Both 2010 and 2016 DFCs were adopted for political areas."*[4]

The DFCs must be regionally compatible regardless of political boundaries in order for the TWDB to administratively approve the explanatory report and prepare MAGs.[5] TWC § 36.108 (d)(1) ensures a regional perspective in joint planning by requiring district representatives to consider "aquifer uses or conditions <u>within the management area</u> (underline added), including conditions that differ substantially from one geographic area to another." The fact that the statute requires individual districts to adopt the DFCs that apply to their territory (TWC § 36.108 (d-4)) does not negate the fact that the DFCs must also be regionally consistent and compatible within the management area.

- *"The assumed pumping used to create both the 2010 and 2016 DFCs was essentially identical and based on void and unenforceable rules."*[6]

Table 1 below presents the 2010 and 2016 DFCs and the estimated pumping (MAG) that would achieve those DFCs. The table shows that the District's assertion is not correct. The assertion is not supported by the technical materials and processes cited in the 2016 Explanatory Report, which documents the analysis of historical pumping trends, projected population growth, and provisions of the Region H Water Plan. Furthermore, pumping was not identical between 2010 and 2016 and was distributed very differently between aquifer sub-units of the Gulf Coast Aquifer System.

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[4] "Technical Review of 2010 and 2016 Desired Future Conditions Adopted by GMA 14 and Applicable to the Lone Star Groundwater Conservation District" prepared for the Lone Star Groundwater Conservation District by Bob Harden, P.E., and Michael R. Thornhill, P.G. on May 21, 2019.
[5] 31 TAC § 356.35.
[6] Revised (May 23, 2019) Draft Groundwater Management Plan prepared by Lone Star Groundwater Conservation District, submitted for TWDB "pre-review, Section 7, p. 11 (3rd bullet)."

Table 1. Comparison of desired future conditions (DFCs) and modeled available groundwater (MAG) values for 2010 and 2016.

Gulf Coast Aquifer System Sub-Units	2010			2016	
	DFC (feet)		MAG (2020) acre-ft/year	DFC (feet)	MAG (2020) acre-ft/year
	Base Yr 2008	Base Yr 2016			
Chicot	-3	-6	1,722	-26	12,600
Evangeline	-13	-25	38,293	4	27,525
Burkeville	-10	-23	-	4	-
Jasper	-61	38	21,614	-34	23,880
Total (acre-ft/year)			61,629		64,005

In addition, addressing the 2010 DFCs in the Plan does not necessitate implementation of rules deemed by the Court to be void and unenforceable. The Court did not declare the DFCs void, only the rules. The 2010 DFCs can certainly serve as the basis for rules that do not violate the decision of the Court. And, in any case, how the District goes about creating and administering its rules has no bearing on the questions of whether the Plan is administratively complete or whether the Plan should address the 2010 DFCs.

- *"The DFCs were calculated by averaging the model results for only the area of Montgomery County."*[7]

Using the Northern Gulf Coast Aquifer System GAM for joint planning ensured that no one political area – county or district – was considered in isolation from the others. It is critical to remember that this process is first a regional effort, and that the DFCs for each district must first be achievable and mutually compatible between the districts in the GMA. Each of the districts in GMA 14 chose to use DFCs for its territory that represented averaged conditions. This enables districts to manage the inevitable and sometimes unforeseen variations in pumping conditions and hydrogeology within their respective areas.

[7] Revised (May 23, 2019) Draft Groundwater Management Plan prepared by Lone Star Groundwater Conservation District, submitted for TWDB "pre-review, Section 7, p. 11 (3rd paragraph)."