

# **Groundwater Management Area 9**

## **2022 DFC Joint Planning Cycle**

*January 25, 2021*

# GMA 9 2022 DFC Joint Planning Cycle

## ***For Today's Meeting:***

- Receive report on status of 2022 DFC Joint Planning Cycle, including schedule. *(Agenda Item 10)*
- Receive presentations on, and discussion of, Texas Water Code §§ 36.108(d)(6), 36.108(d)(7), and 36.108(d)(9) regarding socioeconomic impacts, private property rights impacts, and other relevant information factors as they relate to DFC consideration and adoption. *(Agenda Item 11 )*

# GMA 9 2022 DFC Joint Planning Cycle – Process/Schedule Update

## GMA 9 Joint Planning Process Schedule – Revised 12/14/20

Task	Estimated Completion
GMA 9 meeting – Review project approach and timeline; present report on requirements of Texas Water Code § 36.108; and review previous GAM runs and DFCs and proposed non-relevant aquifer classifications.	November 18, 2019
GMA 9 meeting – Provide project update; discuss DFC statements; discuss possible non-relevant aquifer classifications; and present report regarding Texas Water Code §§ 36.108(d)(1) – 36.108(d)(5) and discuss first five of nine factors.	December 14, 2020
GMA 9 meeting – Provide project update; discuss possible proposed non-relevant aquifer classifications; discuss and identify DFCs to be proposed by GMA 9; and present report regarding Texas Water Code §§ 36.108(d)(6) – 36.108(d)(9) and discuss four remaining factors.	January 25, 2021
GMA 9 meeting – Consider action to approve proposed non-relevant aquifer classifications and proposed DFCs, and to distribute both to the GCDs in GMA 9. <i>Action to approve proposed DFCs for distribution to GCDs must be by 2/3 vote of GMA 9.</i>	March 2021
90-day public comment period on proposed non-relevant aquifers and DFCs – Hold public hearings and make available information used to develop these proposals including how nine factors considered in developing proposed DFCs.	April 2021 – July 2021
<b>Texas Water Code § 36.108(d) deadline for GMA to adopt proposed DFCs.</b>	<b>May 1, 2021</b>
GCDs compile public comments received during public comment period and prepare GCD summary reports.	August 2021
GMA 9 meeting – Review GCD public comment summaries and GCD suggestions to modify proposed revisions to DFCs, if applicable, based upon public comments.	September 2021
First GMA 9 Meeting – Review and discuss complete draft explanatory report.	October 2021
Second GMA 9 meeting – Consider action to adopt final DFCs, non-relevant aquifer classification proposals, and explanatory report. <i>Action to approve proposed DFCs must be resolution adopted by 2/3 vote of GMA 9.</i>	
Prepare and submit DFCs and explanatory report to TWDB and to each GCD. <i>Submission packet due to TWDB within 60 days of action to adopt DFCs.</i>	November 2021
<b>Texas Water Code § 36.108 (d-3) deadline for GMA to adopt final DFCs.</b>	<b>January 5, 2022</b>

# **TWC § 36.108(d) Nine Factor Consideration**

## ***Socioeconomic Impacts Reasonably Expected to Occur***

### ***Socioeconomic Impacts Reasonably Expected to Occur***

Before adoption of DFCs, GCDs shall consider groundwater availability models and other data or information for the management area and consider nine factors including socioeconomic impacts reasonably expected to occur (TWC § 36.108(d)(6)).

### ***Considerations***

- TWC and TAC do not provide guidance on how GMAs and GCDs are to consider this factor.
- Refer to socioeconomic impacts of unmet water needs in state and regional water plans.
  - 2017 State Water Plan
  - 2021 Regional Water Plans – Regions J, K, and L

# **TWC § 36.108(d) Nine Factor Consideration**

## ***Socioeconomic Impacts Reasonably Expected to Occur***

### ***Regional and State Water Planning - TWDB Estimated Socioeconomic Impacts from Unmet Water Supply Needs***

- Estimates are based on the water needs not met in a single year during a drought of record condition in each planning decade.
- Impacts are estimated from the unmet water needs of the irrigation, livestock, manufacturing, mining, municipal, and steam-electric power water user groups.
- Economic impacts include income and job losses.
- Social impacts include population and school enrollment losses.

### ***2017 State Water Plan***

- Statewide Income losses from unmet water needs during drought conditions are estimated at \$73 Billion in 2020 and more than \$151 Billion in 2070.
- Job losses from unmet water needs during drought conditions are estimated at 424,000 in 2020 and 1.3 Million in 2070.
- Unmet water needs are primarily within the irrigation water use category - this is the case for Regions J, K, and L.

# TWC § 36.108(d) Nine Factor Consideration

## *Socioeconomic Impacts Reasonably Expected to Occur*

### ***TWDB Estimated Socioeconomic Impacts from Unmet Water Supply Needs***

#### ***2021 Regions J, K, and L Socioeconomic Analysis***

	Income Losses		Job Losses		Population Losses	
	2020	2070	2020	2070	2020	2070
<b>Region J</b>	\$233 Million	\$257 Million	2,300	3,000	417	539
<b>Region K</b>	\$1.282 Billion	\$2.609 Billion	5,018	27,413	921	5,033
<b>Region L</b>	\$16.57 Billion	\$9.38 Billion	100,514	94,978	18,454	17,438

Source: Ellis, John R., Socioeconomic Impacts of Projected Water Shortages for (Region J, Region K, and Region L) Regional Water Planning Area, Prepared in Support of the 2021 (Region J, Region K, and Region L) Regional Water Plans, 2019.

## **TWC § 36.108(d) Nine Factor Consideration** ***Socioeconomic Impacts Reasonably Expected to Occur***

### ***TWDB Estimated Socioeconomic Impacts from Unmet Water Supply Needs Vs. Socioeconomic Impacts Likely to Occur from DFCs***

- While TWDB analyses is useful to understand importance of meeting projected water needs, it does not evaluate socioeconomic impacts from proposed DFCs at GMA level.
- A similar quantitative tool does not exist to assess socioeconomic impacts of DFC.
- DFCs results in groundwater availability amounts for potential water management strategies that can meet some of the water supply needs.

# TWC § 36.108(d) Nine Factor Consideration

## *Socioeconomic Impacts Reasonably Expected to Occur*

### ***Previous GMA 9 Considerations and Conclusions – Socioeconomic Factor***

#### ***1<sup>st</sup> - Round Planning Cycle***

- To petitions challenging DFCs due to socioeconomic impacts, GMA 9 responded:
  - DFC define management philosophy or approach to reach desirable, achievable and acceptable level of use.
  - DFC was not guarantee of social or economic stability.
  - Short-term fluctuations in water levels in private wells not direct result of DFC but more result of localized pumping demands, weather patterns, and hydrogeological characteristics.

#### ***2<sup>nd</sup> - Round Planning Cycle***

- Regional DFCs establish framework for setting long-term water management programs and practices.
- Regional DFCs are not singular factor in evaluating potential economic or social impacts of water planning on user community.
- Localized implementation of water management initiatives at GCD level more likely to result in direct economic impacts on user community.
- Positive and negative socioeconomic impacts may occur from DFC too lax or too restrictive.

***All Considerations Relevant in 2022 DFC Joint Planning Cycle***

# TWC § 36.108(d) Nine Factor Consideration

## *Socioeconomic Impacts Reasonably Expected to Occur*

### ***Socioeconomic Impacts from DFCs Likely to Occur:***

- Positive and negative socioeconomic impacts considered in management plans and rule updates.
- Potential qualitative socioeconomic impacts:
  - Impacts of lowering water levels on costs of production.
  - Decreasing well yields and potential need for additional wells.
  - Potential for and additional costs of developing alternative supplies.
  - Need to meet water supply needs to avoid impacts of water shortages.

# TWC § 36.108(d) Nine Factor Consideration

## *Impact on Interests and Rights in Private Property*

### ***Impact on Interests and Rights in Private Property***

Before adoption of DFCs, GCDs consider groundwater availability models and other data or information for the management area and consider nine factors such as the impact on interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater in recognized under Section 36.002 of the Texas Water Code (TWC § 36.108(d)(7)).

#### ***Consideration:***

- TWC and TAC do not provide guidance on how GMAs and GCDs are to consider this factor.

# **TWC § 36.108(d) Nine Factor Consideration**

## ***Impact on Interests and Rights in Private Property***

### ***Impact on Interests and Rights in Private Property - Texas Water Code, Section 36.002: Ownership of Groundwater***

- The legislature recognizes that a landowner owns the groundwater below the surface of the landowner's land as real property.
- The groundwater ownership and rights described by this section entitle the landowner, including the landowner's lessees, heirs, or assigns, to drill for and produce the groundwater below the surface of real property, subject to Subsection (d), without causing waste or malicious drainage of other property or negligently causing subsidence and, have any other right recognized under common law.
- The groundwater ownership and rights described by this section do not: entitle a landowner, including a landowner's lessees, heirs, or assigns to the right to capture a specific amount of groundwater below the surface of that landowner's land; or affect the existence of common law defenses or other defenses to liability under the rule of capture.
- Nothing in this code shall be construed as granting the authority to deprive or divest a landowner, including a landowner's lessees, heirs, or assigns of the groundwater ownership and rights described by this section.

### ***Texas Water Code, Section 36.002: Ownership of Groundwater (continued)***

**This section does not:**

- Prohibit a district from limiting or prohibiting the drilling of a well by a landowner for failure or inability to comply with minimum well spacing or tract size requirements adopted by the district;
- Affect the ability of a district to regulate groundwater production as authorized under Sections 36.113, 36.116, or 36.122 or otherwise under this chapter or a special law governing a district; or
- Require that a rule adopted by a district allocate to each landowner a proportionate share of available groundwater for production from the aquifer based on the number of acres owned by the landowner.

# **TWC § 36.108(d) Nine Factor Consideration**

## ***Impact on Interests and Rights in Private Property***

### ***Previous GMA 9 Considerations and Conclusions - Private Property Rights Factor***

#### ***1<sup>st</sup> - Round Planning Cycle***

- In response to petitions challenging reasonableness of DFCs, GMA 9 responded:
  - Any management strategy could have an impact of private property rights.
  - Trinity Aquifer DFC was based on actual pumping vs. authorized pumping.
  - Short-term fluctuations in well levels were not direct result of DFC.
  - DFC is a description of maximum average lowering of water levels acceptable over next 50 years.

#### ***2<sup>nd</sup> - Round Planning Cycle***

- DFCs impacts depend upon on how GCDs incorporate MAGs into management plans, rules and use them in permit decisions.
- DFCs established to accommodate groundwater users – to strike a “balance.”
- DFCs offer positive implications - set regional long-term goals to manage and preserve groundwater resources for benefit of all.

#### ***All Considerations Relevant in 2022 DFC Joint Planning Cycle***

# TWC § 36.108(d) Nine Factor Consideration

## *Impact on Interests and Rights in Private Property*

### ***Other GMA and GCD Considerations***

- DFC process is “iterative” – Through annual and DFC joint planning, GCDs discuss new or emerging issues that may involve re-evaluating, revising, and/or reconsidering DFCs.
- GCDs actively engaged in management activities and programs to carry out statutory mission and manage aquifers through strategies that address aquifer management issues to identify ways to improve and share resources.
- Statutes and Chapter 36 are flexible to develop locally-responsive management programs and management strategies and incentives - management zones, water conservation, reuse and rainwater harvesting - further reduce demand, help achieve DFCs, and consider potential impacts.

***GCDs Consider Available Options Before Taking An Action  
That May Impact Private Property Rights***

# TWC § 36.108(d) Nine Factor Consideration

## *Impact on Interests and Rights in Private Property*

### ***Other GMA and GCD Considerations***

- Potential private property rights impacts considered in management plan and rule updates, and permit decisions:
  - Impacts on property rights of landowners and their lessees.
  - Expectations of existing and future well owners to recover reasonable investments in their water wells and properties.
  - Availability of affordable water of sufficient yield to all properties overlying the aquifer.
  - Availability of affordable water from alternative water supplies.

***Other information relevant to DFCs Consideration and Adoption***

Before adoption of DFCs, GCDs consider groundwater availability models and other data or information for the management area and consider nine factors including and other information relevant to the specific desired future conditions (Texas Water Code § 36.108(d)(9)).

***Considerations and Conclusions from 2<sup>nd</sup> - Round Planning Cycle***

GMA 9 did not identify any GCD-specific and or local issues that may be impacted for the Edwards Group of the Edwards-Trinity Plateau Aquifer DFC and the Ellenburger-San Saba Aquifer and Hickory Aquifer DFCs.

***Considerations from 2<sup>nd</sup> - Round Planning Cycle: Trinity Aquifer***

- ❖ Potential Large-Scale Pumping East of GMA 9 in the Trinity Aquifer
  - GMA 10 would conduct an analysis of impacts from potential pumping
  - GMA 9 would consider results during third-round planning cycle.
  
- ❖ Drawdown from Contiguous, Unregulated Areas
  - Middle Trinity Aquifer was de-watered because of major development in western Travis County, which was unregulated at that time.
  
- ❖ Differences in Trinity Aquifer Hydrogeology
  - Aquifer did not function uniformly across extent of GMA 9.
  - Update to Hill Country Trinity GAM needed to include these differences to develop multiple, achievable DFCs.
  - GMA 9 would consider issue during third-round planning cycle.

***Considerations from 2<sup>nd</sup> - Round Planning Cycle: Trinity Aquifer  
(continued)***

- ❖ City of Kerrville (COK) Conjunctive Use Permit - Spread between actual pumping and MAG contributes to GCD's ability to operate within MAG
  
- ❖ Effects of COK ASR Project on Trinity Aquifer
  - Beneficial to recognize COK's ASR Project and related pumping with two questions: 1) Was COK pumping near current authorized amount?; and 2) If not and they did, would pumping create special challenges for GCDs for either DFC or MAG?
  - Positive impacts to aquifer when COK pumped water back into ASR Project

***Considerations from 2<sup>nd</sup> - Round Planning Cycle: Trinity Aquifer  
(continued)***

- ❖ Kerr County - Two main points: 1) Region experiencing drought for last 5 years since DFCs adopted; and 2) Effect of COK's pumping on Lower Trinity during drought
- ❖ Targeted and Specific Exemptions that May affect Trinity MAG
  - TGRGCD exempts public water supply wells – normally non-exempt under Chapter 36
  - HTGCD exempts agricultural use wells – normally non-exempt under Chapter 36
  - GMA 9 will monitor issues and consider during third-round planning cycle
- ❖ Any other considerations?

# GMA 9 2022 DFC Joint Planning Cycle – Next Steps

## ***March 2021 GMA 9 Meeting –***

- Presentation on DFC feasibility factor and update on other relevant information factor.
- Consider action to approve proposed non-relevant aquifer classifications and adopt proposed DFCs, and to distribute both to the GCDs in GMA 9 (90-day public comment period begins on the day the proposed DFCs are mailed to each GCD).

## ***April 2021 – July 2021 –***

- 90-day public comment period on proposed non-relevant aquifers and DFCs – Hold public hearings and make available information used to develop these proposals including how nine factors considered in developing proposed DFCs.

## ***May 1, 2021 –***

- Deadline to adopt proposed DFCs.