GMA 12 – 9 DFC factors review

Property Rights
Socio-economic Impacts
Environmental Impacts

12.13.24

Previous Presentations

- Environmental Impacts
  - https://posgcd.org/wp-content/uploads/2020/09/GMA12_Aug_13_environmental_final1.pdf
- Socio-economic Impacts
  - https://posgcd.org/wp-content/uploads/2020/10/DRAFT_GMA12_SocioEco-_V2_10192020_JS-Read-Only.pdf
- Property Rights:
  - https://posgcd.org/wp-content/uploads/2020/09/GMA-12-power-point-20201.pdf

Purpose

- These topics were covered during the last planning cycle and in the explanatory report
- Focus on changes in conditions relating to each factor
- All 9 factors in 36.108 will be evaluated again once preliminary DFCs are accepted

Private Property Rights

- (d) …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:
  - (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;

Ownership of Groundwater

- Sec. 36.002. OWNERSHIP OF GROUNDWATER. (a) The legislature recognizes that a landowner owns the groundwater below the surface of the landowner's land as real property.
- (b) The groundwater ownership and rights described by this section entitle the landowner, including a landowner's lessees, heirs, or assigns, to:
- (1) 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
- (2) have any other right recognized under common law.
- (b-1) The groundwater ownership and rights described by this section do not:
- (1) 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
- (2) affect the existence of common law defenses or other defenses to liability under the rule of capture.
- (c) 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.

Considerations

- A GMA must consider the rights of all owners of private property, including all owners of groundwater within the GMA. All interests, whether they favor highest practicable use or conservation, have property rights under the law.
- Impacts may be viewed as both restricting and enhancing property rights.
- Rules adopted by a District to achieve a DFC may have a potential impact on property rights.
- Balancing “highest practicable production” with preservation and conservation

GMA 12 Lore

- This topic was covered in depth in a presentation by Monique Norman in the previous cycle and in the explanatory report.
- Historically, the GMA has settled on the opinion that DFCs are generally neutral with regard to property rights and that the implementation of DFCs at the District level are where most impacts to private property rights are going to occur.

Current Cycle Considerations

- Does the previous reasoning regarding DFC impacts on private property rights still stand?
- Do any proposed changes to DFCs this cycle significantly impact the balance between production and conservation?

Socio-Economic Impacts

- TWC 36.108(d)(6) Directs the GMA to consider socio-economic impacts that are reasonably expected to occur (as a result of achieving the desired future conditions).

State Support

- Texas Administrative Code (TAC), Title 31, Chapter 357.7(4)(A) states, “The executive administrator shall provide available technical assistance to the regional water planning groups, upon request, on water supply and demand analysis, including methods to evaluate the social and economic impacts of not meeting needs.”
- The state supplies data regarding the impacts of not meeting future water supply needs but does not evaluate local impacts caused by projects developed to meet those needs.

GMA 12 Lore

- Previous planning cycles included or referenced the data from the state regarding potential socio-economic impacts associated with not meeting projected water demands.
- Consideration at the GMA level included discussion regarding the need to develop counterbalancing data regarding the local impacts of achieving the proposed DFCs.

Considerations

- Three districts in GMA12 have implemented mitigation or well assistance programs since the adoption of the current DFCs.
- Districts can use current mitigation/well assistance costs and modeled changes in aquifer conditions to develop predictive models for local costs associated with the proposed DFCs.

Local Cost Models

- Only include costs for physical equipment or well replacements
  - Increases in pumping costs or changes in water quality might not be captured
- Would like only include costs associated with exempt wells
  - Estimates of impacts on non-exempt wells would require additional development, documentation or estimation
- Likely understate local socio-economic impacts

Expanded Socio-economic Models

- Require extensive work to develop and support
- Requires expertise not commonly associated with GCDs
- Can expand the scope of considered socio-economic impacts to include:
  - Ecosystem services
  - Impacts to non-exempt wells
  - Changes in land usage and tax bases

Expanded Socio-economic Models

- Require time to research and develop
  - Review existing models
  - Stakeholder input, scoping
  - Development and tuning
  - Review
- Viable in future cycles?

Surface Water – Groundwater Interactions

- TWC 36.108(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:
- (4)other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;

Primary Questions

- Interactions between major aquifers and river alluvium
  - Major aquifer contributions to alluvial water levels
- Major aquifer contribution to surface flows through spring flow and seeps
- Interactions between alluvial aquifers and river systems

Potential Environmental Impacts

- Spring flow and SW-GW interaction are two potential environmental issues of interest in GMA 12
- Springs are typically controlled by localized site-specific topographic, hydrologic, and geological conditions
- SW-GW interactions largely controlled by local hydraulic gradients over time scales of hours to days and in the immediately vicinity of stream/aquifer contact
- Collection of representative data on SW-GW interaction and spring flow is time consuming, relatively expensive, and difficult to perform. Very limited data exists in GMA 12.

Potential Environmental Impacts

- River authorities are currently charged with managing in-stream flows in Colorado and Brazos rivers
- The evaluation river gage hydrographs by the TCEQ
  - Influenced by external management and human activity
  - Little or no “pre-development” data
- Instream Flow program does not quantify GW flow
- Groundwater flow into streams can be an important contributor for helping river authorities maintain critical or subsistence flows

Challenges

- More data needed
  - TWDB Springs Initiative
  - Alluvial contribution to surface flows
  - Localized interactions between river alluvium and major aquifer
- New research unlikely to developed in time for this planning cycle
- Reliance on modeling in the near term

Discussion

- Questions, comments or complaints?

- Thank you