

**Goliad County Groundwater Conservation District Response to Nine Factors for
Desired Future Condition**

GMA 15 Representatives are required to consider nine specific factors before voting to adopt any proposed desired future condition. These factors are taken from Texas Water Code Chapter 36.108(d):

“Not later than September 1, 2010, 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) Under 36.108(d)(1), member districts are required to consider aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another.

The aquifer uses and conditions differ substantially across Groundwater Management Area 15. Groundwater production is generally greater in the northeastern portions of GMA 15 in Colorado, Wharton, Matagorda, and Jackson Counties. Groundwater in the northeastern portion of GMA 15 is predominately used for irrigation purposes. Groundwater production in the central portion of GMA 15 in Victoria County is predominately used for irrigation, municipal, and industrial uses. Groundwater production in the north central portion of GMA 15 in DeWitt County and Karnes County is predominately used for domestic and livestock purposes as well as supporting oil and gas production in the Eagle Ford Shale. Groundwater production in the southwestern portions of GMA 15 is predominately used for domestic, livestock, and agricultural uses including irrigation. The condition of the Gulf Coast Aquifer differs significantly geographically. Generally, the capacity of the Gulf Coast Aquifer to produce groundwater increases to the northeast and decreases to the southwest as well as increases down dip relative to up dip portions of the Gulf Coast Aquifer. The adoption of the desired future conditions of GMA 15 are not anticipated to significantly impact aquifer uses or conditions during the planning horizon and would 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. Recharge is higher in the Eastern counties due primarily to more farming with the western counties predominately grass and brush cover.

- (2) **Under 36.102(d)(2), member districts are required to consider the water supply needs and water management strategies included in the state water plan.**

Based on a review of the summary of the water supply needs and water management strategies of the 2012 Texas State Water Plan, the adoption of the desired future conditions of GMA 15 are not anticipated to significantly impact the water supplies, water supply needs, or water management strategies of the 2012 Texas State Water Plan during the planning horizon and would 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.

- (3) **Under 36.108(d)(3), member districts are required to consider 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.**

The Texas Water Development Board published total estimated recoverable storage for aquifers within GMA 15 in a report titled GAM Task 13-038: Total Estimated Recoverable Storage for Aquifers in Groundwater Management Area 15. The total estimated recoverable storage for the Gulf Coast Aquifer within GMA 15 ranges between 92,200,000 acre-feet and 276,600,000 acre-feet. Based on a review of the total estimated recoverable storage and simulated water budgets associated with the Baseline (Option 1) and High production (Option 1) model runs, the adoption of the desired future conditions of GMA 15 are not anticipated to significantly impact the hydrological conditions within GMA 15 during the planning horizon and would 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.

- (4) **Under 36.108(d)(4), member districts are required to consider other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water.**

Spring flow has declined in Goliad County for many years and continued drawdown of the aquifer will result in a further decline in spring flow.

- (5) **Under 36.108(d)(5), member districts are required to consider the impact on subsidence.**

Based on reports developed by INTERA for member districts related to subsidence within GMA 15, the adoption of the desired future conditions of GMA 15 are not anticipated to significantly impact subsidence during the planning horizon and would 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.

(6) Under 36, 108(d)(6), member districts are required to consider socioeconomic impacts reasonably expected to occur.

Based on a review of the water management strategies of the 2012 Texas State Water Plan associated with supplies from the Gulf Coast Aquifer within GMA 15 and the anticipated impact on groundwater resources caused by groundwater production in the future, the adoption of the desired future conditions of GMA 15 are anticipated to impact socioeconomic conditions within Goliad County during the planning horizon and could alter the 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. Continued drawdown will increase well installation cost and pumping cost. Additionally, there will be the potential for permit allocation restrictions.

(7) Under 36.108(d)(7), member districts are required to consider 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.

The member districts recognize that the regulation of groundwater production, including the adoption of desired future conditions, could significantly impact interests and rights in private property.

(8) Under 36.108(d)(8), member districts are required to consider the feasibility of achieving the desired future condition.

Based on predictive groundwater availability modeling conducted by GMA 15, the achievement of the desired future conditions are considered feasible.

(9) Under 36.108(d)(9), member districts are required to consider any other information relevant to the specific desired future conditions.

Model accuracy is critical to quality implementation of the desired future conditions.