

GOLIAD COUNTY GROUNDWATER CONSERVATION DISTRICT

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Date: December 10, 2025

To: GMA-15

From: Michelle Shelton, General Manager

Subject: District Performance in Achieving DFCs (2015–2025)

This memorandum provides a summary of the Goliad County Groundwater Conservation District's (GCGCD) performance in achieving Desired Future Conditions (DFCs) from 2015–2025. Groundwater-level monitoring data collected throughout this period demonstrate that conditions within the District remain consistent with the adopted DFCs. The District continues to implement a data-driven management approach that ensures long-term conservation and responsible groundwater use.

Monitoring Results:

Between 2015 and 2025, GCGCD recorded approximately 742 groundwater-level measurements, within Goliad County. A total of 152 wells were monitored, and 45 wells contained both 2015 baseline and 2025 readings suitable for long-term comparison. Results indicate an average change in groundwater levels of 3.96 feet (decline). These results indicate groundwater-level declines in most wells, with a few localized areas experiencing larger changes. The water level for one well declined 17.43 feet during this period. Declines of 5 to 10 feet were not uncommon. Only two of the wells we looked at had a slight increase in water level during this period.

Measured Results (Depth-to-Water, ft below land surface):

Metric	Value	Interpretation
Number of monitor wells (total)	152	Active wells monitored in Goliad County
Matched wells (2015–2025)	45	Used for trend comparison
Average change (2015–2025)	3.96 ft	Average decline in groundwater level

Adopted Desired Future Conditions (DFCs):

Aquifer	DFC (ft)
Chicot	13
Evangeline	34
Burkeville	21
Jasper	21

Management Discussion:

Most of the wells in Goliad County are completed in the Evangeline aquifer. Therefore, we will use the DFC for the Evangeline for comparison. From 2015 to 2025 the water level in the Evangeline in Goliad County is expected to drop 4.68 feet in accordance with our DFC. The measured average decline in water level over the same period is 3.96 feet. Long-term performance to our DFC is very good.

In a shorter-term outlook, performance to the DFC is not as good from 2020 to 2025. For this period our decline in accordance with the DFC should be 2.55 feet. The average decline measured over this period is 3.00 feet. This is a decline of more than we should see. This is possibly due to short-term weather variability. It has been a relatively dry period for Goliad County. Also, over this period we have noted a marked increase in the number of wells being drilled. It is worth noting that in accordance with the GCGCD Groundwater Availability Model (GAM) the expected decline over this period is 2.94 ft over this period. GCGCD chose a DFC of less than the decline predicted by our model in hopes that with rules changes and education we could reduce groundwater consumption.

Looking at the entire Gulf Coast Aquifer System (GCAS) the GCGCD GAM predicts a decline of 5.23 feet from 2015 to 2025. We did not set a DFC for the GCAS. If we reduce modeled water level decline by 25 percent similar to like we did for the DFC for the Evangeline, the decline of GCAS between 2015 and 2025 should be 3.92 feet. Our measured average for the same period of 3.96 feet. Slightly more than this DFC for GCAS had one been adopted. Overall performance to DFCs is good. Returning to more average rainfall should help to at least slow our groundwater level decline.

Conclusion:

It is worth noting that most of the decline in our water level occurred between 2020 and 2025. We hope this short-term trend doesn't become a long-term trend. It is also possible that some of this water level decline is due to groundwater withdrawal for Eagleford oil production to our north over which we do not have any control. We will continue to monitor water levels closely and make any adjustments necessary. We have reduced the yearly allocation for groundwater permits to 3/8 acre-ft per acre per year from 1/2

acre-ft per acre per year in response to measured water level declines. We have changed rules regarding sizing of stock ponds. These rules changes are expected to take time before we see results. We recently did a presentation at a brush control workshop educating citizens on the decline in our groundwater levels and the need to reduce consumption of groundwater. We will continue with education efforts for the time being. Additional rule changes will be made if they prove to be necessary in the future.

Based on the District's empirical monitoring data, the Goliad County Groundwater Conservation District is **meeting its Desired Future Conditions** for the previous joint-planning cycle. Groundwater-level changes observed from 2015 to 2025 reflect expected groundwater level declines. Measured water level declines agree well with the GCGCD GAM.

So far, we seem to have done a good job setting DFCs that are obtainable. DFCs set in accordance with the TWDB GAM are clearly not obtainable. For the Evangeline aquifer from 2015 to 2025 we should not see any decline in groundwater levels in accordance with the TWDB GAM instead of the 3.96 feet measured average decline.

The District will continue to collect bi-annual groundwater-level measurements and will provide future evaluations to GMA-15 as required by HB 2078, SB 1583, and the joint planning process.