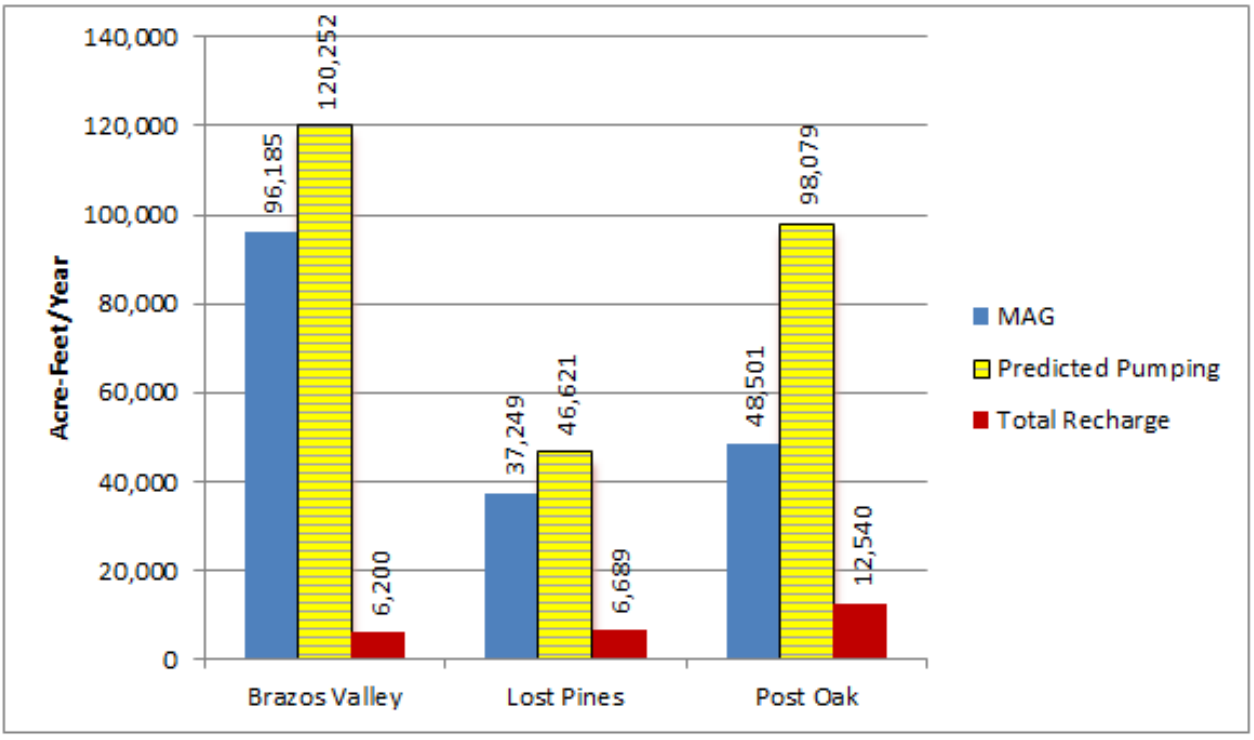
The aquifers are not ours; we're just borrowing them from future generations.

The title of my comments should be the guiding principle for all GMA-12 groundwater districts.

The recently distributed GMA-12 document (see attached), however, caused me to question if the groundwater districts have lost sight of their responsibility to preserve and conserve our aquifers for future generations.

My comments and supporting discussion follow.

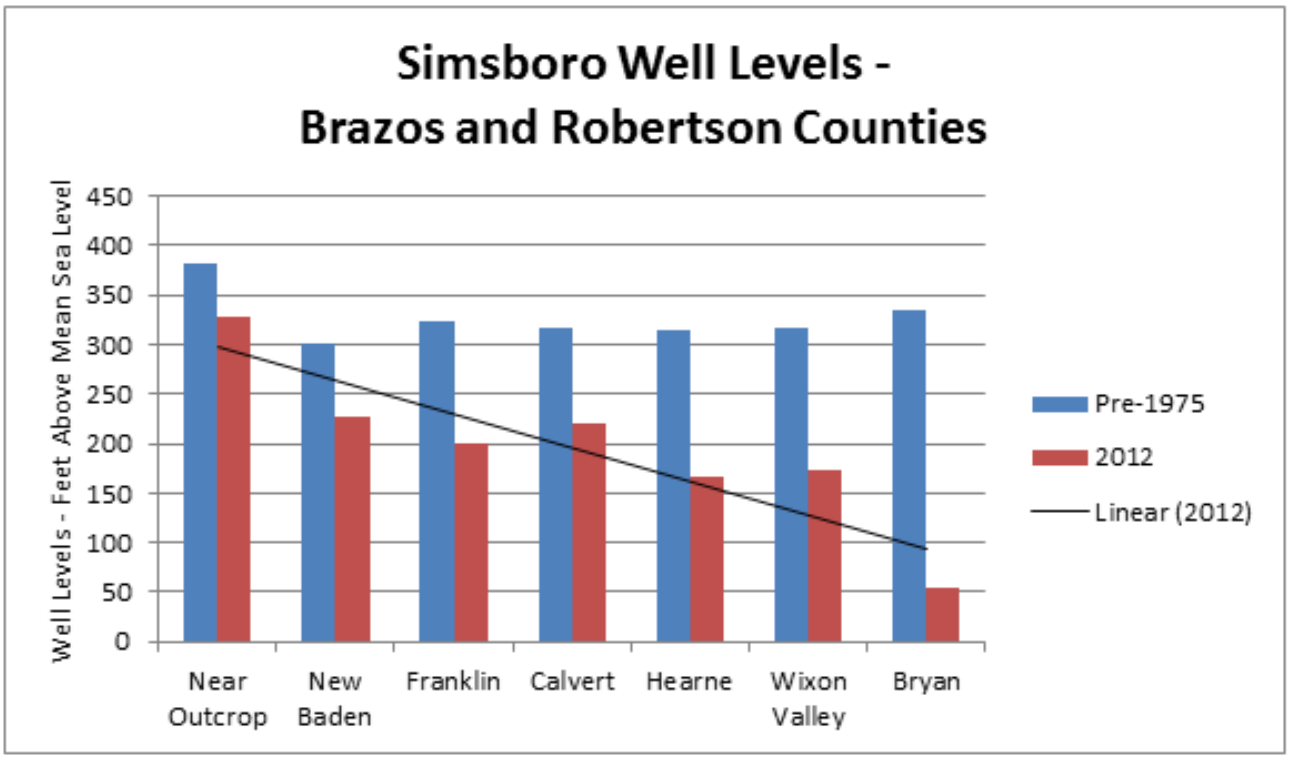
Graph 1: The Overpumping of the Simsboro Aquifer in GMA-12.



NOTES:

1. The graph allows a comparison of the MAG, Predicted Pumping, and Total Recharge for the Simsboro Aquifer in three of the GMA-12 groundwater districts.
2. MAG is the Modeled Available Groundwater for 2060 calculated by the Texas Water Development Board – it is the amount of groundwater which can be pumped to achieve the Desired Future Conditions which are crafted by the groundwater districts.
3. Predicted Pumping for 2070 is a number derived by the groundwater districts.
4. MAG and Predicted Pumping were extracted from the attached GMA-12 document.
5. Total Recharge is the amount of rainfall falling on the outcrop area that penetrates into the outcrop area - the values were extracted from the groundwater districts' management plans.
6. The included groundwater districts are: Brazos Valley Groundwater Conservation District; Lost Pines Groundwater Conservation District; Post Oak Savannah Groundwater Conservation District.
7. Predicted Pumping exceeds the Total Recharge by 1,940% for Brazos Valley.
8. The Simsboro is being depleted because pumping exceeds recharge.

Graph 2: Example of the effects of pumping exceeding recharge.



NOTES:

1. Brazos and Robertson Counties were studied because of the extensive amount of historic well data and the long time-period of significant pumping in the municipal well fields north of Bryan.
2. The pre-1975 and 2012 average water levels of all state-monitored Simsboro wells in Brazos and Robertson Counties are compared – raw data provided by Texas Water Development Board.
3. Before overpumping started in 1975, the Pre-1975 wells' groundwater levels were all about 320 feet above mean sea level with some wells spouting groundwater 45 feet into the air.
4. Data are grouped according to latitude starting with the lowest latitude (Bryan) and progressing to the highest latitude (the Near Outcrop is in northernmost Robertson County).
5. The Near Outcrop is 38 miles north of the Bryan/College Station/Texas A&M well fields located just north of Bryan.
6. In 2011, total Simsboro pumping permits for both counties equaled 109,430 acre-feet while 68,075 acre-feet of Simsboro groundwater was reported as pumped: Bryan/College Station/ Texas A&M held over 55% of the permits and accounted for over 55% of the pumping.
7. The total recharge amount for the Simsboro in the two counties is only 6,200 acre-feet/year.
8. In 2011, Simsboro pumping permits exceeded Simsboro total recharge by 1,765%.
9. The Simsboro wells have experienced significant declines because the aquifer is being pumped in amounts greater than recharge.
10. The aquifer is not being preserved and conserved for future generations.
11. Permit/pumping data provided by Brazos Valley Groundwater Conservation District; recharge amount from Brazos Valley Groundwater Conservation District Management Plan.

COMMENT 1: *The total and deep recharge rates for each aquifer in each groundwater district should be included in all GMA-12 reports.*

Out of all the problems revealed in the two graphs, none was more stunning than the GMA-12 'predicted pumping' amount exceeding recharge by 1,940% (see Graph 1).

Without recharge amounts to serve as yardsticks in Graph 1, no one would have understood the magnitude of the over-pumping planned for the Simsboro.

Recharge amounts for the aquifers were not included in the attached GMA-12 document circulated for comment.

The word "recharge" is almost never mentioned at a groundwater district meeting. This has always surprised me because most, if not all, people understand the basic hydrogeological concept that recharge is a most important consideration when planning how to sustain aquifers for the future.

In fact, 27 European nations have recently adopted laws requiring that aquifers be pumped at a rate less than their recharge.

COMMENT 2: *The GMA-12 groundwater districts featured in Graph 1 should be required to identify their groundwater management plans for the Simsboro Aquifer as 'Managed Depletion.' In addition, any other aquifers being depleted because of a GMA-12 groundwater district's management plan should be identified as a 'Managed Depletion' aquifer.*

I believe that anyone looking at the above two graphs would conclude: 1) the groundwater districts are using 'Managed Depletion' as their management plan; and 2) the Simsboro is being mined (defined as pumping exceeding recharge) and not being protected for future generations.

These facts should be made clear to the public.

COMMENT 3: *The desired future conditions (DFCs) of all the aquifers in the GMA-12 groundwater districts should allow the aquifers to be sustained for future generations. If the DFCs are not close to zero drawdown, the districts should 1) explain why they cannot prevent the depletion of the aquifers, and 2) present their future plans to alleviate the mining of the Simsboro and other aquifers.*

As an example, the three GMA-12 groundwater districts in Graph 1 have set Simsboro DFCs close to an average 300-foot drawdown which means that the aquifer is being depleted. But what truly reveals their inability to protect our aquifers is that their target 300-foot drawdown (which was set only five years ago) will be exceeded by 200 feet based on the predicted pumping (see Page 19 of attached document).

This unacceptable situation stems from the fact that the predicted pumping exceeds the MAG for each of the groundwater districts – and in the case of Post Oak, the predicted pumping exceeds the MAG by 100% (see Graph 1). If the permitting and pumping are not regulated, one has to question why have a groundwater district and why spend significant amounts of money establishing a DFC.

The groundwater districts should adopt DFCs with a much lower drawdown – and keep the permitting and pumping below the MAG.

Setting DFCs that are achieved only by mining of aquifers does not fulfill the purposes of groundwater districts as outlined in Chapter 36 of the Texas Water Code. Those purposes encompass the conservation, preservation, protection, and recharging of aquifers.

COMMENT 4: *GMA-12 groundwater districts should protect landowners' property rights by using rules promulgated by the Kenedy County Groundwater Conservation District as a model.*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COMMENT 5: *The GMA-12 groundwater districts need to provide a complete accounting of why the aquifers continue to be depleted even though they have spent multi-millions of dollars to preserve and conserve the aquifers.*

The citizens established the GMA-12 groundwater districts to preserve and conserve the aquifers.

Texas State Senator Steve Ogden who sponsored the legislation forming Brazos Valley and Post Oak stated in 2001: "The primary driving force of the groundwater conservation districts was a concern that this was the only way we could possibly protect ourselves if someone wanted to come in and drill water wells in the Carrizo-Wilcox Aquifer, and transport large quantities of water to any place under the sun."

The data displayed in Graphs 1 and 2 suggest that the Simsboro Aquifer is not being preserved and conserved; instead it is being mined and depleted. The other aquifers – especially the Carrizo - are also being depleted based on the adopted DFCs.

The GMA-12 groundwater districts need to be held accountable for not only explaining why the groundwater levels are declining but also where the millions of dollars have gone.

For example, each GMA-12 groundwater district should provide an accounting for how much money has been spent to enhance the recharge of the Simsboro Aquifer since the district's formation.

I believe that the citizens who approved the formation of the groundwater districts have the right to know why the groundwater districts have adopted management plans that allow our aquifers to be depleted – and how they plan to change the management plans so that our aquifers can be preserved and conserved for our children and their children. Governmental agencies such as groundwater districts are expected to be transparent and accountable.

Comments submitted by:

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Landowner
Milam County, Texas
24 March 2015