

27 June 2010

Memorandum

To: Mr. Ron Fieseler

From: Milan J. Michalec
12 Brandt Road
Boerne, TX 78006

Subject: GMA-9 Public Meetings, Kerville, Boerne, Dripping Springs, 21-24 June 2010.

Mr. Fieseler,

Considerable public input was provided during these meetings on the preferred desired future condition of the Edwards Group of the Edwards -Trinity Plateau Aquifer and the Trinity Aquifer. Many speakers expressed a desire to protect springflow and minimize drawdown of available groundwater supplies. As much of the input was based on modeling which was developed to show what may happen, I want to show what does happen. And what has happened already.

This perspective is required because physical evidence recorded during the 2007-2009 Drought indicates the demand on the available groundwater in much of GMA-9 has already exceeded the existing water supply. This is not only in terms of providing sufficient discharge from wells to meet local needs, but also in terms of the discharge of the springs that provide baseflow for area rivers and streams that in turn replace water consumed from storage dams many miles away and to provide critical recharge as these flows pass over the Balcones Fault Zone to recharge the Edwards Aquifer.

These relationships must be recognized as the development of conjunctive water sources is increasing as a strategy in response to population increases. The two fastest growing counties in the San Antonio Metropolitan Statistical Area (MSA) are Kendall and Comal. According to the U.S. Census Bureau, Kendall County increased in population from 22,200 in 1998 to 32,866 by 2008 – a 48 percent increase. During the same timeframe, Comal County jumped from 72,954 to 109,635- up 50.3 percent. Underscoring the regional impact on groundwater, consider the Austin MSA where the Hays County population has increased from 89,991 to 149,476, a 66.1 increase percent in ten years.

By August 2009 of the 2007-2009 Drought, the Texas Commission on Environmental Quality had identified six public water systems limiting water use to avoid shortages in Kendall County and fourteen in Comal County. Nineteen more were in Bexar County. The growing list also included eleven in Bandera County and four in Hays County. The source of these wells is the Trinity Aquifer.

In the same time period, the Bexar Metropolitan Water District was hand delivering notices announcing impending mandatory restrictions for customers in north Bexar County. Addressing the groundwater supplying these neighborhoods, a spokesman noted:

"The Trinity Aquifer is feeding these systems and it does not recharge as well and it does not rebound as easily as the Edwards,"

In its October report to Governor Perry, the Drought Preparedness Council provided the widespread impact of low groundwater levels in the Edwards-Trinity Aquifer system and its river basins. "Medina and Canyon Lakes reported new record low levels and Lake Travis remained at its third lowest level on record. Victoria saw enough improvement in reservoir levels to drop Stage 2 watering restrictions. However, the Edwards Aquifer remained low, causing San Antonio to remain in Stage 2 restrictions, while Kerrville continued Stage 3 restrictions." As it is the springs of the Edwards Group of the Edwards-Trinity Plateau Aquifer that feed the headwaters of the Medina and Guadalupe Rivers, this serves well to illustrate their relevance in Edwards-Trinity Aquifer system.

Though the primary source of water for San Antonio is the Edwards Aquifer, the city also consumes water from the Trinity Aquifer. Water began flowing from Canyon Reservoir through the Western Canyon Treated Water Supply Project for distribution at a storage facility to San Antonio Water System (SAWS) customers in north Bexar County in 2007. To augment this supply, groundwater from the Trinity Aquifer has been pumped from wells adjacent to the same facility in increasing quantities since 2002. Originally planned to yield over 5,000 acre feet a year, the average annual production was approximately 1,000 acre feet from 2004-2007. As drought progressed through 2008, production was cut even more to reduce the drawdown of adjacent private wells. The 2009 SAWS Water Management Plan update notes: "Given the hydrogeologic character and existing demands on the Trinity Aquifer, the Task Force determined that the existing Trinity supplies will be unavailable during a repeat of the drought of record conditions."

In summary, the primary source of water for those who live within the boundaries of GMA-9 is the Trinity Aquifer, an aquifer noted for highly variable yields and an inseparable component of the Edwards-Trinity Aquifer system. Given drought is a regular occurrence and the effects increase significantly from east to west within GMA-9 and in recognition of the existing demands currently placed on the Edwards-Trinity Aquifer system and in anticipation of those likely to follow in the future, the following recommendations are provided.

1. Declare the Edwards Group of the Edwards-Trinity Plateau Aquifer relevant. Establish a desired future condition of no net increase in average drawdown through 2060.
2. Establish a desired future condition for the Trinity Aquifer of no more than a 20 foot increase in average drawdown by 2060. This assumes a 33 percent reduction in pumping during drought years (Draft GAM Runs 09-11, 09-12, and 09-24, Supplement).

Through these actions the Groundwater Conservation Districts of GMA-9 will be better equipped to exercise their responsibilities when most needed-in time of drought.

Milan J. Michalec
Director, Precinct 2, Cow Creek Groundwater Conservation District