

Water is not a commodity to be pumped to depletion

Greg Sengelmann, For the Express-News Published 12:00 am, Saturday, March 25, 2017

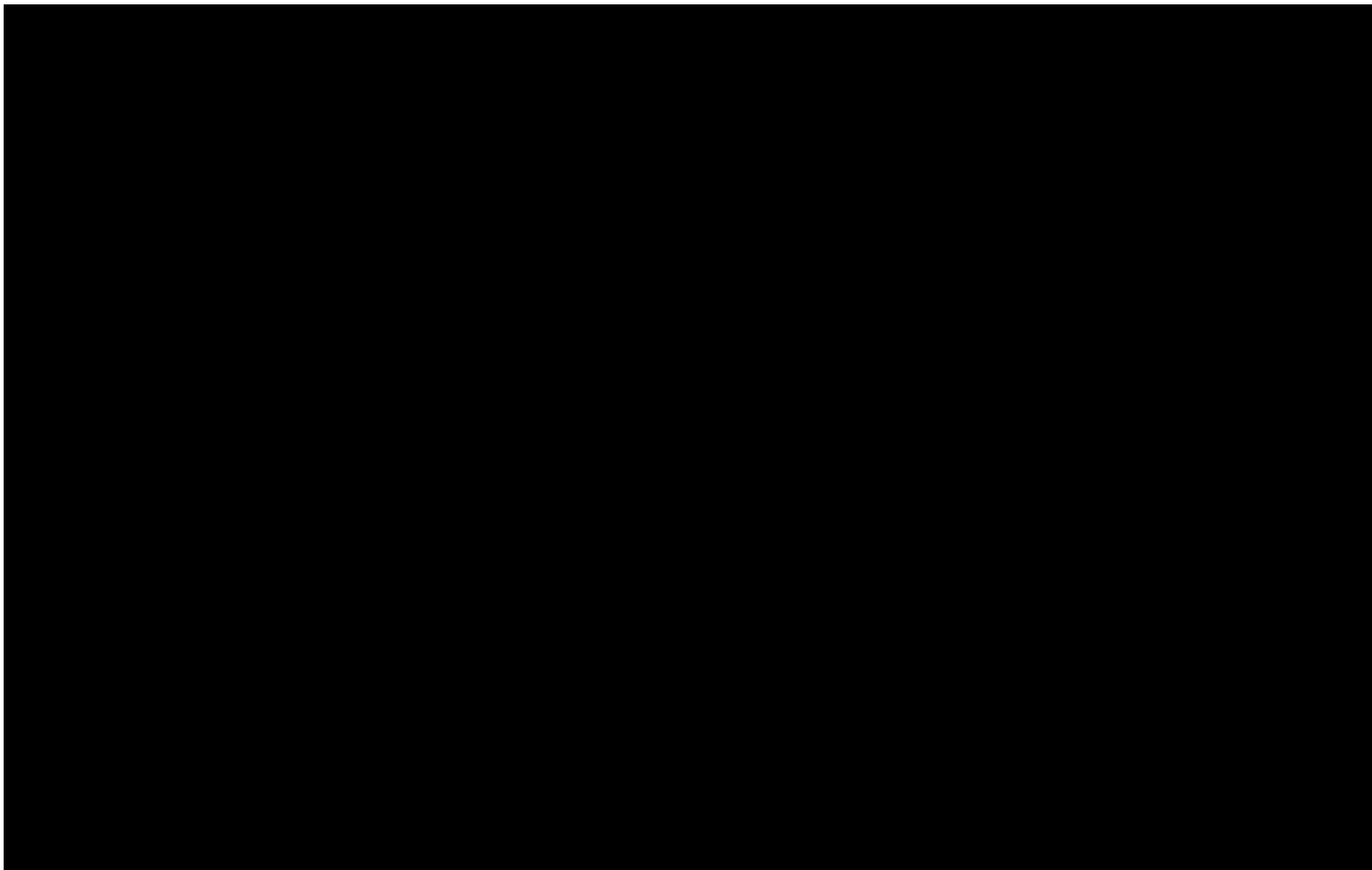




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A recent commentary in the Express-News by [Simon Sequeira](#), the CEO of Quadvest Water & Sewer Utility in Magnolia, attempts to blame all of the state's water issues on groundwater conservation districts, or GCDs.

The commentary ("The next generation of water wars; Governmental greed siphoning dollars, future from Texans," March 5) states, "Many of these districts were created to prevent the big cities like Houston, Dallas, and San Antonio from coming into their county and taking their water."

I can agree that many GCDs were created in response to movement of water from rural to urban counties; however, the motives were to prevent the unfettered pillaging of water without any regulatory constraints or concerns about the impact on local landowners and natural resources. In other words, GCDs were created to protect private property rights of every landowner, not just those who want to pump the aquifer to extinction and sell that water for a profit.

The author references an independent study conducted by the [Bush School](#) of Government and Public Service at Texas A&M University that concluded a "review of the regulatory practices of the local GCDs supported the conclusion that Texas has a regulation-induced shortage of groundwater."

But the study reviewed groundwater regulation strictly through the prism of how to make the most money from the resource, ignoring all other factors. Selling all groundwater for its "highest and best use," as the report advocates, would mean no water for irrigation, no water for environmental flows, and no water for small domestic and livestock use. Once the aquifers are depleted in agricultural areas, agriculture will literally dry up and blow away; we will never replace irrigation water with desalinated groundwater or seawater.

The Bush School plan is shortsighted and myopic.

Let's compare that study with one conducted by independent hydrogeologists from the [Bureau of Economic Geology, Department of Geological Science](#) at the [University of Texas at San Antonio and Intera Inc.](#) completed in 2012.

The objective of the study, "Sources of Groundwater Pumpage in a [Layered Aquifer System](#) in the Upper Gulf Coastal Plain, USA," was to quantitatively assess sources of groundwater pumpage, impacts of pumpage, time scales of impacts, and reversibility of pumpage impacts in dipping, unconfined and confined aquifers using modeling and monitoring data from the [Carrizo-Wilcox Aquifer](#) in Texas as an example.

"With rising groundwater demands, it is important to quantify how much groundwater is available for production and the impacts of such production on the system," the introduction says.

This report assessed the pumping impacts to the Carrizo-Wilcox Aquifer using predictive pumping from the 2002 State Water Plan out to the year 2050. The study area covers the entire Carrizo-Wilcox Aquifer from Northeast Texas to the border with Mexico, and divides the aquifer along the same divisions as the three groundwater management areas, or GMAs, in those areas — the northern section (GMA 11), the central section (GMA 12) and the southern section (GMA13). A summary of the results from that study indicated that:

Pumpage changed 3 out of 10 streams from gaining to losing in the semiarid south, meaning aquifers would be sucking water out of the streams instead of adding water to the streams.

Pumpage reversed regional vertical flow gradients in about 40 percent of the entire aquifer area from the Carrizo-Wilcox Aquifer to the overlying Queen City Aquifer. This is important as water quality could be affected by changes in vertical flow gradients.

Simulations of predictive pumpage to 2050 indicate continued storage depletion (41 percent from storage, 32 percent from local discharge, and 25 percent from regional discharge capture), meaning everyone is losing water, even landowners who aren't pumping any groundwater.

The report looked at time scales of pumpage impacts in the southern section by running the model to look at effects over 500 years. Pumping at 1999 rates will continue to decrease aquifer storage for up to 500 years, lowering aquifer levels for every landowner whether pumping or not.

Simulations conducted to assess aquifer recovery after pumpage ceases showed that 100 years after stopping all pumping, the aquifer would only recover 38 percent of the amount held in storage.

GCDs are required to take these potential impacts into account, not just economic considerations to the largest pumpers.

Sequeira argues that groundwater should be regulated just like oil and gas. The goal of oil and gas regulation is to ensure every single drop is eventually produced and sold. That cannot be the goal for aquifers, both because we need them as a perpetual supply of water and because not only does our entire economy depend on an adequate supply of water, our very lives depend on water.

Land that has been pumped dry of its oil and gas can still be used for homes, businesses or agriculture; land that has no access to water is economically useless. Ensuring a perpetual supply of water is the only way to protect the private property rights of every landowner.

Sequeira wrote that the "[Texas Supreme Court](#) has said that water is private property and water will be regulated like oil and gas."

Here is what the Texas Supreme Court actually said in [Edwards Aquifer Authority vs. Day](#):

"The principal concerns in regulating oil and gas production are to prevent waste and to provide a landowner a fair opportunity to extract and market the oil and gas beneath the surface of the property. Groundwater is different in both its source and uses. Unlike oil and gas, groundwater in an aquifer is often being replenished from the surface, and while it may be sold as a commodity, its uses vary widely, from irrigation, to industry, to drinking, to recreation. Groundwater regulation must take into account not only historical usage but future needs, including the relative importance of various uses, as well as concerns unrelated to use, such as environmental impacts and subsidence."

The cities along the Interstate 35 corridor with groundwater permits from the Edwards Aquifer Authority are well aware of the impacts to overpumping an aquifer. An excerpt from the Edwards Aquifer Authority website makes this evident:

"It is estimated that there's 25-55 million acre-feet of water available, and if current use is only 450,000 acre-feet a year, then it sounds like there's enough water to last more than 100 years! However, the aquifer contains a lot of water that can't really be produced in legal or practical terms. The problem is the springs go dry when the aquifer is still 95 percent full. So as long as we are going to maintain at least minimal natural spring flows for the sake of endangered species, recreational economies, downstream ecosystems, and downstream economies, then the large amount of water below the level of the springs is essentially

unavailable.”

Sequeira also wrote, “In San Antonio, the [San Antonio Water System](#) has been forced to build a 200-mile water pipeline from Bureson County into San Antonio because the ‘governmental shield’ of groundwater districts around the city prevented landowners from selling their water to SAWS.”

This statement is blatantly untrue. To begin with, Section 36.122 of the Water Code prohibits GCDs from discriminating against export, so any attempt would be illegal and easily remedied in court. Second, SAWS is already exporting water from Gonzales County and has 30-year permits to do so.

My district, the Gonzales County Underground Water Conservation District, is familiar with the I-35 corridor, where many of the thirsty large cities are located. We have issued export permits to the Schertz-Seguin Local Government Corp. for 19,263 acre-feet per year; the San Antonio Water System for 12,688 acre-feet per year; the Canyon Regional Water Authority for 7,400 acre-feet per year; the Hays Caldwell Public Utility Agency for 10,300 acre-feet per year; the Guadalupe Blanco River Authority/Texas Water Alliance Limited for 15,000 acre-feet per year; and the Aqua Water Supply Corp. for 5,000 acre-feet per year.

Sequeira wrote that it is past time for “Texas to reform the current water plan and replace it with a comprehensive plan that puts the end user — not the government — first.”

The “government” he speaks of is the local citizenry where the groundwater is owned and located, those people who will benefit from — and be directly impacted by — local pumpage. I can think of no one better to regulate our aquifers to ensure everyone gets their fair share and everyone’s property rights are protected.

Greg Sengelmann is general manager for Gonzales County Underground Water Conservation District.

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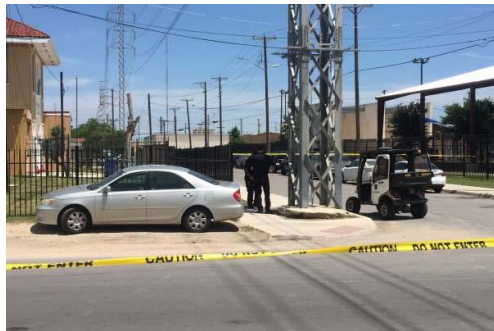
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