

Carlos Guerra: Trinity Aquifer's biggest problem isn't drought, it's too many wells

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There is nothing like a long drought to remind us of the blessing we have in the Edwards Aquifer. Even through droughts, its massive output of water has fueled our city's prosperity — and now, indirectly, it is fueling our explosive population growth.

But as major development spills north of the city, and far beyond the Edwards' reach, tens of thousands of new residents of northern Bexar, Bandera, Kendall, Comal and Kerr counties are discovering how different other aquifers are, as water levels in individually owned and water-system wells drop precipitously, or as the wells dry up completely.

Those wells tap the Trinity Aquifer, which is really three small and very delicate aquifers very different from the Edwards.

Fred Bartel, a lifelong resident of the Welfare area, continues to cajole officials of the many small jurisdictions served by the Trinity to keep development at a low density because the Trinity simply can't sustain massive population.

"The Trinity (Aquifer) has different layers — the Upper Glen Rose, Middle Glen Rose, Cow Creek," he says.

Water flows very slowly through its honeycomb formations of limestone, and sand, silt and conglomerates, above and between them, he explains, and in many areas, it flows vertically.

So, if one spot is sucked dry, it may take a long while before new water replenishes it.

But if water levels of area wells are dropping precipitously, the Trinity's slow flows are only one reason. Another is that the Trinity takes in very little rainfall.

"We estimate that only between 3 percent and 5 percent of the water that falls on the ground goes into the aquifer," Bartel says, "and a lot drains into other aquifers."

The most recent estimate is that, annually, 59,000 acre-feet of Trinity water ends up in the Edwards.

Another reason for distressed wells, Bartel believes, is that water is being pumped out of the Trinity at rates that exceed the recharge, even in wetter times.

"I have a spring that furnishes water to my house, and it's running," he says. "But in the lower Trinity, we're running into dry wells, so what is happening is that we're pumping water out of the aquifer faster than it can recharge because there is so much overlay (between the aquifers) that the water only recharges the top (strata), and very few wells tap the top. So, the springs are OK, but the bottom is going dry."

Larry Schwope, a second-generation water-well driller from Boerne, confirms that water levels in area wells are dropping significantly.

"We're keeping pretty busy, mostly lowering the pumps on older wells," Schwope says. "Some are 500-foot wells and the water level was at 260-270 (feet), so we had set the pump at about 400 so they would be in 120 to 140 (feet) of water. But water tables have gone down, so we have to lower those pumps, some as many as 100 feet, to get them into the main strata."

But is all this because of the 17-month-long drought we are in?

"I'm 80 years old, and I remember the drought of the '50s when we saw about five years when we got down to 10-12 inches of rain a year," Bartel recalls. "This drought is a bugger; we've gone a long time without any rain. But it's a pussycat compared to the drought of the 1950s."

The real culprit, he says, is that "the poor old Trinity has just been tapped out by too many wells."

Tune in Tuesday for more on the imperiled Trinity Aquifer.