

Media siege didn't reveal East Porterville's real drought peril

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In the worldwide reporting frenzy on California drought and dry wells in East Porterville, I hadn't read about a health crisis until Bee reporter Andrea Castillo told us about it [on Sunday](#).

This is about human suffering among people who already are dying younger due to dirty air, polluted water, poverty and lack of education. The drought is adding one more stress in their lives, as Castillo's story dramatically showed.

What about Porterville right next door? If the San Joaquin Valley is drying up, is there still indoor plumbing there? This is another piece of the media explanation that hasn't been clear, leaving some readers with a poor understanding.

The Valley's underground is not a big bathtub filled with water. If a town dries up, as East Porterville has, it does not necessarily mean folks next door will lose wells, too. The Valley's underground is quite complex, as I explained [in a story Sunday](#).

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Porterville hasn't dried up. Its wells are in a better place.

Several miles away from East Porterville's dry wells, Porterville's wells are drilled in deeper in soils that washed out of the Sierra Nevada over many centuries, says water engineer Dennis Keller of Visalia.

East Porterville is nestled on higher ground, closer to the Sierra. The soils are much shallower between ground level and the bedrock of the mountains — meaning there's less room for water underground.

"Some of East Porterville's wells are only 25 feet deep," says Keller, who has spent 44 years working as an engineering professional in Tulare County.

So exactly where does the water come from for East Porterville?

During wetter times, it moves through the Tule River and Porter Slough, seeping into the nearby shallow soils, Keller says. The slough is a natural ditch that has been altered to carry irrigation water.

But there hasn't been much water in the river or the slough for the last two years. And the snowmelt runoff this year is among the smallest in the state.

"The estimate is 8% of average runoff," Keller says.

Even when the river is running, there's another problem in East Porterville, and it's important to understand it.

Wells in East Porterville are known for nitrate-laced water. Nitrates are chemicals that come from fertilizers, septic systems, dairies and naturally occurring. East Porterville's nitrate problem is mostly naturally occurring, often meaning decaying vegetation, says Keller.

Why is that relevant?

Because this town of 7,500 relies on private wells. The state does not require regular water testing and reporting on private wells. Which means the water could sometimes be dangerous for residents.

The overwhelming majority of Californians are on public water systems that are required to regularly test wells. But if you're among the private well owners, you are on your own, as the State Water Resources Control Board [makes clear on its webpage](#).

Nitrate contamination can cause a possibly fatal blood disease in infants. It is called methemoglobinemia, or blue-baby syndrome. [The World Health Organization](#) says the disease is a risk in developing countries, usually not in industrialized places, such as the United States.

So what's the score now in East Porterville? Some 3,000 people live in homes with dry wells, filling up large tanks with water and living with another environmental stress. And the summer just started this week.