

## Dust and desperation: How the drought is hurting health

By Deborah Schoch

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Guillermo Lopez, 31 (left), and his mother, Andrea Lopez, 67, fill 5-gallon jugs of water from Kings Pure Water in Fresno. The Lopez home well ran dry in February, so they have to buy water in town twice a week, each time hauling home about 10 jugs. In 2003, Guillermo nearly died of valley fever. Now his body overheats easily and, in a home without water, they are unable to run their swamp cooler. The whole ordeal has caused so much anxiety and stress, Guillermo says he had to go back on his anxiety pills.

FRESNO — Four years of drought in California is wearing on the bodies and minds of the people who live in the San Joaquin Valley.

State health officials say they have not seen anything to link the drought to changes in residents' health. But local doctors and health experts, and a drive south on Highway 99 from Sacramento to Tulare County, tell a different story.

Physicians say they've treated more children and adults struggling to breathe as dust from plowed-over farm fields and wildfires penetrate nostrils and lungs. Mental health counselors report that they're hearing from more residents suffering anxiety and depression, fearing that the drought will cost them their homes, farms and livelihoods. Calls are up sharply at a local suicide prevention hotline.

Dr. Juan Carlos Ruvalcaba says he's seeing more cases of exacerbated asthma and chronic obstructive pulmonary disorder, and believes the drought is the reason.

"We have kids with allergies, watery eyes, coughing," said Ruvalcaba, who runs a UCSF residency program at Clinica Sierra Vista, a clinic in Fresno. He has been giving out more inhalers and nasal sprays.

The giant, drought-fueled Rough Fire nearby spewed smoke and ashes over Fresno last month, sending more residents with severe breathing problems to Kaiser Permanente Fresno for emergency care, said Dr. John Gasman, chief of its pulmonary and critical care medicine.

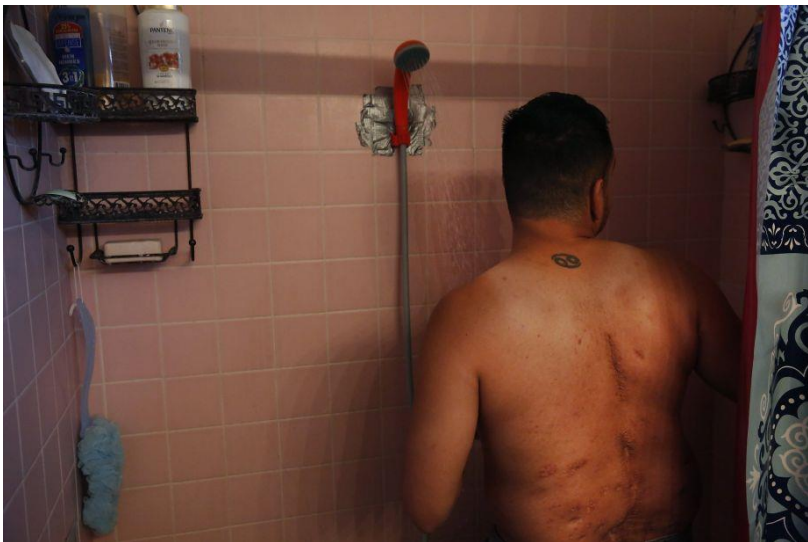
Dr. Praveen Buddiga, an allergy and asthma specialist at Baz Allergy, Asthma and Sinus Center, said the drought "is just setting us up for a tsunami, in terms of respiratory health conditions."

It is undermining the resilience of a region already known for its poverty.

Carla Sawyer, a Tulare County public health nurse, said she has counseled three families who have lost close relatives due to the drought: two farmers who killed themselves after their wells went dry, and a third man who took his life after losing his job on a parched farm.

The stories sound familiar to Sally Tripp, a loan and grant officer at the U.S. Department of Agriculture office here, who aids homeowners trying to replace dried-up wells.

"They're desperate. They're angry. They're crying," she said.



Guillermo Lopez shows deep scars from his yearlong struggle with valley fever as he takes a shower with a temporary, battery-powered shower head that pumps water from the bathtub.

Sam Vang, a local USDA soil conservationist, said he has raced out to several farms to talk down farmers who told him they wanted to kill themselves. Managers of an area hotline report that they have seen a sharp increase in calls in the past six months from people saying they are on the brink of suicide.

“We’ve had to call Emergency Services to get them because they’ve already swallowed the pills or they have a weapon,” said Barbara Breen, a local suicide prevention program manager. Her hotline used to average two or three such crisis calls a month. In the last week of July alone, she counted four.

In Sacramento, officials at two agencies overseeing Californians’ physical and mental health — the departments of Public Health and Health Care Services — said they had not yet received solid evidence that the drought is harming public health. Health officials

say a dramatic increase last year in West Nile virus could have been drought-related, but the connection has not been confirmed.

The state agencies may not catch up anytime soon to the anecdotal evidence piling up in doctors’ offices. Not much has changed since a 2010 report spearheaded by the U.S. Centers for Disease Control and Prevention found that the nation lacked a robust system to track and respond to a drought’s impact on health.

The report recommended that states track drought-related health impacts. To date neither the departments of Public Health nor Health Care Services has programs specifically designed to monitor the drought’s effects.



Tzexa Cherta Lee (right) works with his nephew, Cha Lee, to attach a new pipe for diverting water from his new well to his crops in Del Rey. The water level on his land now sits at about 170 feet, a drop of 30 feet since last year.

### As wells run dry, despair sets in

Vang turned off Highway 99 late one morning this summer and pointed his USDA-issue pickup southeast toward Del Rey and Parlier, crisscrossing almond and peach orchards, fields of raisin grapes, and gashes of plowed-over soil and toppled trees.

Many farmers here have fallowed their fields, either to save water or because their wells had gone dry, Vang said.

Drilling a new well can cost a farmer from \$35,000 into six figures, and many firms these days require cash. Then farmers must wait six to 18 months or more to get it drilled and pumping water.

Vang recounted the calls he has gotten from farmers with dry wells who had lost hope.

“Hold on. I’ll be there in 30 minutes,” he said he

tells them, before grabbing pamphlets on federal aid and suicide prevention and heading into the fields.

Over the past year, he said he has gotten six such calls. He urges the farmers to focus on their families, not financial losses, and points them toward USDA loan programs that could help them. To date, none of the callers has followed through with suicide.





Tzexa Cherta Lee takes a quick break to feed peanuts to a pigeon at the Old Oakland Farmers' Market where the Lees go on weekends to sell their Asian vegetables to help make ends meet since the water shortage.

In Del Rey, Vang pulled his truck up to a shed where Tzexa Cherta Lee was inspecting a new delivery of cardboard cartons for his Asian vegetables — eggplant, squash, long beans, yams and melons — which were destined for supermarkets as far away as British Columbia.

That Lee has vegetables to ship is remarkable after more than a year of loss and retrenchment.

He pointed to the three old wells that failed him.

“You have all the crops dying, and you feel like you are dying with the crops,” he said.

“Each day, you go see your crops, and it’s like your heart is broken.”

Lee lost three harvests in one month, worth \$100,000. He paid \$50,000 to drill one new well, and friends and customers loaned him another \$50,000 to drill a second one. He has no idea

how long it will take him to recover enough to pay off his loans. His wife now drives vegetables to an Oakland farmers' market on weekends to try to make ends meet.

He said, despite the stress, he never considered suicide. But he recalls a fellow farmer, facing delays in getting a well drilled and powered up, who told him, “If I lose my land, I will just hang myself.”

The valley suicide prevention hotline that Breen manages, operated by Kings View Behavioral Health Systems, saw a steady increase in calls in the first six months of each year: 2,445 calls in 2013, 5,776 in 2014 and 7,314 in 2015. She measured only the first six months of each year, since this year’s second-half figures aren’t available yet.

Suicides in the four counties hit hardest economically by the drought — Fresno, Kings, Tulare and Kern — rose by an average of 35 percent from 2009 to 2013, state data show. The average increase for all California totaled 3.5 percent.



Andrea Lopez, 67, tries to cool down after hauling a load of 5-gallon jugs from the car to inside the house after she and her 31-year-old son, Guillermo, refilled them from a store in Fresno. The Lopezes ran out of water when their well went ran dry in February. Now Guillermo and his mother have to buy water twice a week.

### Vulnerable to the heat and dust

Guillermo Lopez’s well went dry in February, shutting down the swamp cooler that cooled his family’s home just south of Fresno.

Nine years ago, Lopez, 31, was diagnosed with severe valley fever, a fungal infection that causes flu-like symptoms and can be lethal. It has left him especially vulnerable to dust, heat and infection. He needs to be in cool surroundings, and on one July afternoon, in 103-degree heat, he huddled near a small, well-worn air conditioner in his kitchen.

With the lawn gone to dust, he is coughing more. He struggles to keep clean when the spigots are empty and the toilet won’t flush.

He and his family never knew how much water it takes to flush a toilet. “Now we know. It’s 2.5 gallons,” he said.

Nearly all the wells in this neighborhood of 60 homes and trailers have dried up, said Sue Ruiz, who works for Self-Help Enterprises, a Visalia nonprofit that aids valley residents whose wells no longer supply water.

Families who have lost their wells risk dehydration and heat stroke because there is no water to run their swamp coolers. They push back against the drought any way they can



Tzexa Cherta Lee walks past a stretch of sandy soil that is being prepped with drip irrigation to save water on his land in Del Rey (Fresno County). After three wells failed, customers and friends helped him pay for two new wells. Now Lee has enough water to keep his business going.

After Maria Molina's well dried up, relatives rallied to pay for a large water storage tank that now sits filled outside the Molina family home. Molina's mother, who lives with the family, is on oxygen and gets dialysis due to liver disease. Molina worries that her mother will get an infection without adequate amounts of clean water. Her oldest son and her toddler grandson both suffer from asthma that has worsened in the heat and the bad air.

A block away, Lopez showed off a battery-powered portable shower he found online. If he pours water into the bathtub, the device, with orange spigots and piping, sucks the water up and spits it out like a regular shower head. Still Lopez and his mother, 67, said their stress has been increasing.

"I had to get my anxiety pills renewed," Lopez said. "I wasn't sleeping at night. I had to get sleeping pills. They had to increase my depression medication."

Katrina Pointras has a front-line view of the unfolding drama as an American Red Cross disaster manager who oversees emergency water deliveries.

Even now, many people in the valley don't believe just how bad things have gotten, she said. She compares the drought to a pot of water that warms so slowly that the frog doesn't realize it's about to be boiled.

"This isn't like a tornado," she said. "This is a very slow percolating disaster."

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Andrea Lopez, 67, kisses her 8-month-old granddaughter, Carissa, while trying to get her to take a nap. She took Carissa's clothes off to keep her cool. The Lopez home in Fresno ran out of water when their well went dry in February and so they can't use their swamp cooler