

Hanging on in Navajo Nation: First the water turned orange, then the air went bad

By NIGEL DUARA SEP 08, 2016 | 10:40 AM | SHIPROCK, N.M.



Since a mine leak tainted the river water, Bertha Etsitty and others in Navajo Nation worry about their crops. (Nigel Duara/LA Times)

A year ago, the people of Shiprock watched their crops shrivel as a week without water stretched into a month, and then a whole lost season.

Bertha Etsitty's watermelon vines curled and stiffened, even as her grandchildren emptied their water bottles on the leaves in a failed bid to keep the patch alive. The field of alfalfa died too, as did the onions, the squash and the cantaloupe.

This year, Etsitty planted corn. It's a harder crop, and she can turn a faster dime on it by steaming the young green ears, which she sells by the truckload in Arizona. She smiles and offers a visitor a yellow-and-brown ear. Inside the husk, the cob is damp and a little smoky.

"Try it."

It is as much a dare as an invitation.



Orange-colored water in a retention pools built to contain the contaminated water that exploded from the Gold King Mine in 2015. (Brennan Linsley/AP)

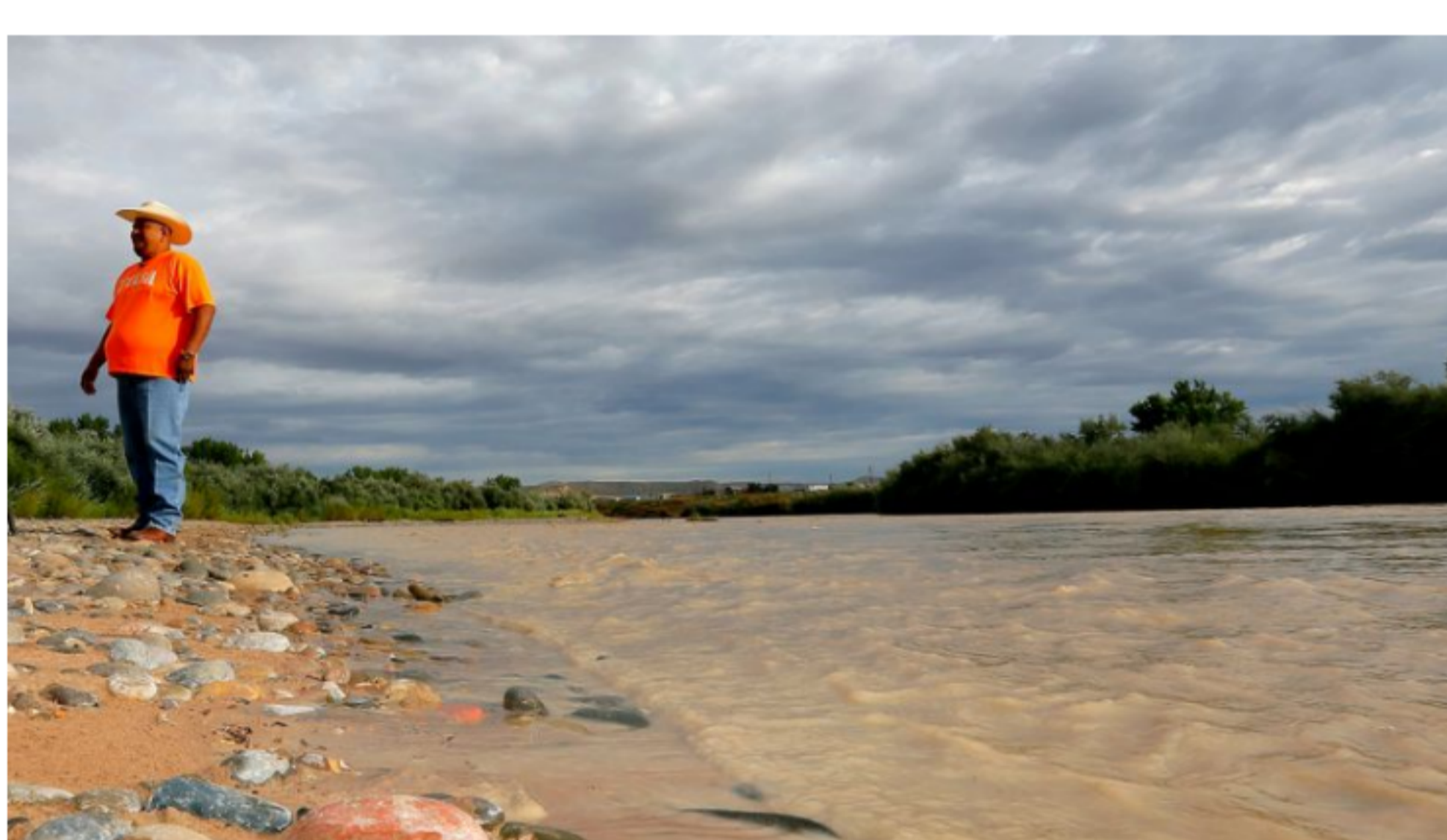
The water that grew this corn turned a rusty orange last year when a plume of acid-laden runoff exploded from the Gold King Mine in Silverton, Colo., and rolled down the Animas and San Juan rivers, through the trout streams of Durango and into the agricultural heart of Navajo Nation, right to Etsitty's fields.

The state of New Mexico sued the state of Colorado, and both sued the Environmental Protection Agency, which has taken responsibility for the excavation operation near a closed mine shaft and has now declared it a Superfund site, clearing the way for a multimillion-dollar cleanup.

The mine shaft sprung a small leak on Aug. 5, 2015, that quickly grew to a torrent of turbid water that swept the chemicals and heavy metals downstream, some of the material settling into the sediment.

The Navajo have also sued the EPA, claiming the spill not only ruined farms and livestock operations, but destroyed crops essential to Navajo religious practices, especially corn. The nation is divided into chapters, which function much like counties. Etsitty's chapter, Shiprock, stopped using San Juan River water last year, and — since then — has periodically declared the water unsafe.

The hard-packed soil here was once home to sheep farms, including one owned by Etsitty's mother. But the Navajo Nation decided the area would be more useful as crop land. So a canal was carved out, irrigation lines connected and, for a time, agriculture thrived in the high desert. But the mine disaster was a reminder that it remains a parched and unforgiving place.



Davis Filfred walks along the San Juan River in Montezuma Creek, Utah, near where the spill took place. (Matt York)

One Friday last month, Etsitty glowered at a growing cluster of thunderheads north of her farms. Rain, any other year a blessing in this arid region, is now a harbinger of doom. Since the spill, the rain reawakens the chemicals that leached into the river beds and turn the water a muddied dark brown.

Etsitty was into the third day of a water shutoff, still facing another week before she'd be able to turn open the water gates that feed the long stretches of crops here. Without water, her corn has begun to adopt the same hunched, drooping look of her crops last year.

"Unfortunately, the damage is not yet done," Navajo Nation President Russell Begaye told U.S. Senate Committee on Indian Affairs in April. "Because the toxic contaminants have been embedded in the sediment of the river, the Navajo Nation now faces the continuous threat of recontamination with every storm and increase in river flow."

At the site of the mine eruption, the rocks are still orange. Twenty miles downstream, the water runs a yellowish-brown. Samples here have shown concentrations that run the periodic table — aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, organic carbon, potassium, selenium, silver, sodium, thallium, vanadium and zinc.

The concentrations found in the water aren't strong enough to threaten human life, but aquatic life has occasionally been threatened by long exposures to higher-than-normal concentrations of the metals, according to the San Juan Basin Health Department, which still urges swimmers and kayakers to wash off any river water when they leave the area.

The state of Colorado continues to do long-term monitoring until two seasons' worth of farm water runoff can be tested, testing that is expected to be completed after the spring rains next year. The EPA has pledged to continue to monitor the water in 30 sampling locations in Colorado, Utah, New Mexico and three tribal reservations. And the Superfund designation is likely to spur years of cleanup efforts.



Family members pick crops at Bertha Etsitty's farm. (Nigel Duara/LA Times)

But it's not just the water that's under suspicion here. It's also the air.

The Fruitland coal formation in the San Juan Basin is home to more than 35,000 gas and oil wells. Extraction of natural gas — methane, mostly — includes some leaks. A European satellite detected a giant plume of methane over the Four Corners region of the U.S. in 2003.

Methane, said Earthworks Policy Director Lauren Pagel, is a perfect conductor of carcinogenic pollutants that "hitchhike" on the gas itself.

When the methane cloud was first reported, the oil and gas industry initially denied responsibility, claiming up the presence of the odorless, colorless gas to natural phenomena. Then, a NASA team mapped the cloud in a first-of-its-kind observation last year.

The study showed — conclusively, its authors said — that the methane cloud was man-made. This year, using delicate infrared equipment, an Earthworks team [documented](#) the methane production and leakage from facilities in southern Colorado and northern New Mexico. Spending time in close proximity to the gas processing plants was difficult for the inspection team.

"We smell odors, we get rashes," Pagel said. "Our eyes water, our throats hurt."

Etsitty said while the methane cloud sounds menacing, she has more pressing concerns, like keeping the lights on. After last year, Etsitty and her siblings, who own small farms in the area, are barely getting back on their feet. Last year, when the bills mounted, Etsitty estimated she lost about \$40,000 in missed sales and dead crops.

Nearby, Etsitty's granddaughter, 9-year-old Mahqua Peterson, grated just-picked corn tassels against cheesecloth into a silver bowl, building small mounds of canary-yellow pollen, a sacred element in daily personal and larger religious ceremonies.

On the road back to Shiprock, the formerly verdant fields are now yellow, green and brown in equal measure. Etsitty drives by emptied-out lots stacked with rusted farm equipment.

Though she planted this year, many here did not. Many of them, she said, cannot possibly survive another lost growing season. She doesn't know what will become of them.

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