

## CASE STUDY

# San Lorenzo Valley Water District (SLVWD) is still recovering from the CZU Complex fire that led to burned plastic water pipes.



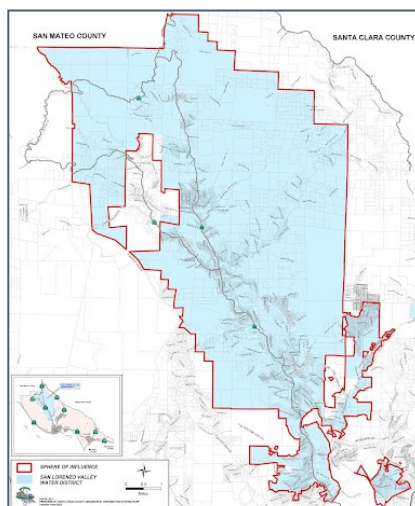
In 2021, more than 900 homes were destroyed in the CZU Lightning Complex Fire that tore through 86 thousand acres in the Santa Cruz Mountains. The district lost 4.5 million gallons of water after a seven-mile-long high-density polyethylene (HDPE) pipe melted from the intense heat. To have enough water to fight this fire, “Officials with the SLV Water District had to refocus water flow so firefighters battling the fire would have access to water.”<sup>1</sup> The district lost 100% of its raw water intake structures, including all three water tanks, which store millions of gallons of water. The seven miles of HDPE piping was also destroyed, after it had melted.

The SLVWD faces an estimated \$20 million in repairs to infrastructure burned in the fire. The fire destroyed 7.5 miles of water line in addition to the raw water intake infrastructure. “Both are lifeblood to the San Lorenzo Valley’s drinking water system, District Manager Rick Rogers said. “Right now we do not have a water source in Boulder Creek — we’re pumping water up from Quail Hollow,” Rogers said. “The system is in fragile shape.”<sup>2</sup>

The Federal Emergency Management Agency (FEMA) could fund up to 75% of replacement costs for eligible damage, but for the additional costs, the district is proposing customers take on a monthly surcharge of \$10 per month. “Looking forward, Rogers said he hopes to be able to get all their groundwater sources back online within the next three years.”<sup>3</sup>



High-density polyethylene (HDPE) pipe burning in the CZU Lightning Complex Fire.<sup>4</sup>



The map shows the rough boundary of San Lorenzo Valley Water District in Felton, Ben Lomond, Boulder Creek and other areas. The system encircles an area where Big Basin Water Co. provides water around Highway 236. (San Lorenzo Valley Water District)<sup>5</sup>

“We know from past urban and forest fire environments, such as the Paradise Fire and the Camp Fire in Santa Rosa, there is potential for recontamination. Water distribution networks are you know, very dynamic systems where we can’t always predict flows.”

Nate Gillespie, Supervisor, Water Treatment & Systems at San Lorenzo Valley Water District, Kion 5/46, 7/7/21

“The District lost seven miles of high-density polyethylene (HDPE) pipe in the CZU fire. During the fire, Rogers said, “All the pipe melted below the storage tanks, and all five million gallons went right out onto the road and down into the creek in a 12-hour period.” And while the storage tanks are made of steel and survived the fire, the pipe acted like a chimney, so the toxic smoke and soot pulled up into the melting pipe and came out in the tanks, coating them inside with residual HDPE.”

Rick Rogers, Director of Operations, San Lorenzo Valley Water District, San Lorenzo Valley Post, 7/8/21

- <https://www.ksbw.com/article/wildfire-destroys-water-pipeline-in-san-lorenzo-valley/33707509>
- <https://www.santacruzsentinel.com/2021/08/03/san-lorenzo-valley-water-district-to-hold-public-hearing-on-fire-recovery-surcharge/>
- <https://slvpost.com/slv-water-and-czu-fire-recovery-an-update-from-the-san-lorenzo-valley-water-district/>
- <https://abc7news.com/czu-complex-san-lorenzo-valley-water-district-bay-area-wildfires-contamination/6398103/>
- <https://santacruzlocal.org/2022/01/25/water-quality-rates-could-rise-with-big-basin-san-lorenzo-valley-water-merger/>

For more details on this case study or to discuss the benefits of Ductile iron pipe contact one of DIPRA's Regional Engineers at <https://www.dipra.org/contact-dipra/ask-an-engineer>