



PROMOTING RELIABLE ACCESS TO SAFE AND AFFORDABLE WATER  
FOR ALL SAN LORENZO VALLEY RESIDENTS

## Replacing Pipelines Lost in the CZU Fire

### SLVWD Receives “Sticker Shock” from Consultant Report

by Jim Mosher & Mark Dolson

The SLVWD Board received a “sticker shock” consultant report at its last meeting. Replacing the two above-ground High Density Polyethylene (HDPE) water supply lines destroyed by the CZU fire will likely cost \$53.8 to \$62.8 million. This is triple the District’s original estimate of \$20 million for all the CZU fire infrastructure damage.

The approximately 7 miles of lost pipelines (Peavine and 5-mile pipelines) are a critical part of SLVWD’s infrastructure, connecting Peavine, Sweetwater, and Clear Creek surface water intakes to the Lyon Treatment Plant. The SLVWD board hired the Freyer and Laureta firm to study construction needs, which they presented at the February 17 board meeting.

The consultants examined five alternatives for replacing the pipelines: 1) above ground HDPE pipe (duplicate previous construction); 2) above-ground welded steel pipe to reduce risk of damage

in case of another fire; 3) below-ground HDPE pipe with either (a) above ground stream crossing or (b) below-ground creek crossing; 4) new pipeline routes for water obtained from Clear and Sweetwater Creeks using either independent or common pipelines, with pumping stations; and 5) common Clear and Sweetwater Creek pipeline with a new treatment facility.

Expert teams assessed each option based on four key criteria: safety, including fire hardening; constructability, including potential costs; operations and maintenance focusing on meeting established performance levels while facilitating long-term maintenance; and stakeholder impact, including potential community and environmental benefits and risks.

The teams provided numerical scores for each option using the identified criteria. Option 3(b) – below-ground HDPE pipe – was clearly the preferred choice, particularly when examining potential risks. It also provides optimal earthquake, wildfire, landslide, and debris flow protection.

The consultants preliminary estimate of \$53.8 million to \$62.8 million for Option 3(b) may change as the project progresses given the complex construction, regulatory, and environmental factors involved. They did not provide cost estimates for the less desirable options, although they stated that they do not anticipate major cost savings.

Following the presentation, President Gail Mahood noted that the estimated cost created serious sticker shock and wished to examine less costly solutions and determine potential FEMA reimbursement. Director Bob Fultz requested more specific information on the impact of not replacing some or all of the pipes. General Manager Rick Rogers said that the district would need to draw more water through its wells, leading to adverse impacts on both the aquifer and the surrounding environment.

The board did not take any formal action, although they agreed on option 3(b) as preferable, and instructed staff to initiate conversations with FEMA as soon as possible, and reengage the consultants to conduct a more detailed study of the preferred option. Click and scroll down to see the [consultant’s PowerPoint](#).

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# Water Consolidation Update

## San Lorenzo Valley water districts and companies progress slowly and steadily toward consolidation

by Mark Dolson

Three small water companies just north of Boulder Creek off of Highway 236 have successfully operated on their own for many decades: Bracken Brae (24 connections) and Forest Springs (128 connections) are non-profit “mutuals” adjacent to SLVWD; Big Basin is a for-profit company with roughly 500 connections further up the road. In contrast, SLVWD services about 8000 connections.

California promotes consolidation of smaller companies into larger districts, but these three companies were not motivated to pursue this until they sustained massive damage to their facilities in the CZU Fire. Consolidation discussions ramped up last fall, and it now seems likely that water delivery responsibilities for each of these companies will eventually be assumed by SLVWD. However, much remains to be resolved.

Bracken Brae is currently furthest along the road to consolidation. The company operates with no paid staff as part of a Homeowners Association. Until August 2020, their water came mostly from surface flows, with a well for use in times of high turbidity. This all changed in a single day when the CZU Fire destroyed nearly all their facilities (and seven homes).

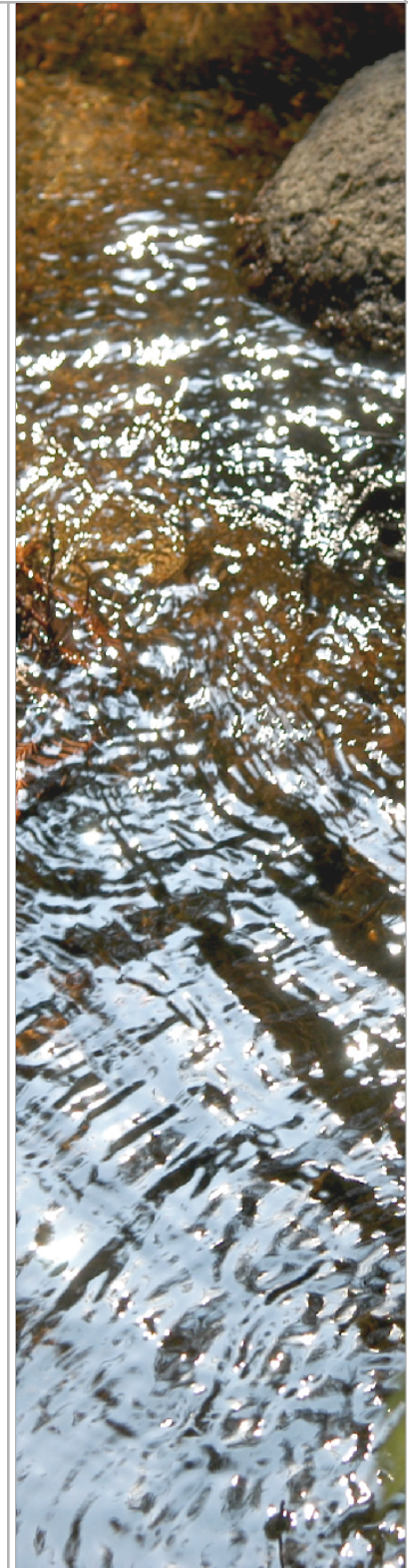
The community mobilized and connected with Big Basin to restore the flow of water by December 2020. In parallel, they wisely applied for FEMA funding in October 2020 and were ultimately found to be eligible. In contrast, Forest Springs was deterred by initial claims that neither they nor Bracken Brae

would be eligible, and is now trying to persuade FEMA to accept a belated claim well past the original deadline. Big Basin, on the other hand, is a for-profit company and is categorically ineligible for FEMA funds.

FEMA’s policy is to cover 75% of the cost of rebuilding, including some degree of improvement to address updated code requirements and fire-hardening needs. However, Bracken Brae will have the option of using their FEMA funds to implement a revised approach in which their water is pumped up to them from SLVWD and no longer taken directly from local streams. They are still awaiting formal FEMA approval and final determination of how much money will be provided, but their members have already voted unanimously to explore consolidation with SLVWD.

In parallel, SLVWD has received a \$3.2 million grant from California to construct an intertie between the two systems. This same intertie will likely also need to provide water to Forest Springs and Big Basin, so it will be important to size everything accordingly. As soon as the SLVWD Board is satisfied that there is minimal financial risk to the District, they will move ahead on developing detailed plans. District Manager Rick Rogers is currently hoping that construction bids can be awarded in fall 2022. (In contrast, an eventual consolidation with Big Basin will need to go through a formal LAFCO process.)

Rogers feels strongly that the District should help SLV neighbors in need, and all three water systems clearly meet this description. Nevertheless, given SLVWD’s own financial challenges, this response cannot be allowed to create new financial burdens for the District’s current ratepayers. Happily, this is a good time to seek State financial support for these initiatives, but clear written agreements to protect all parties will be essential, and it will take many months to sort this out.



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# Challenges to SLVWD Water System Master Plan

By **James F. Mosher**

Our San Lorenzo Valley Water District (SLVWD) has a complex, aging, and antiquated infrastructure and needs major, expensive repairs and upgrades. This was the message delivered by AKEL Engineering Group when it presented the new Water System Master Plan to the SLVWD Board at its November 3, 2021 meeting. The Board hired AKEL to develop the plan to assess the system's needs, prioritize repairs and upgrades, and estimate costs.

SLVWD's challenges reflect three key factors: (1) a relatively small ratepayer base and rural, mountainous terrain; (2) several decades of deferred maintenance; (3) damage from the CZU fire, risks of future fires, and uncertainties associated with climate change and droughts.

SLVWD has about 7,900 ratepayers, a small number compared to other California water districts, yet it maintains 190 miles of pipeline, a relatively large number given the small ratepayer base. The district also has 55 water storage tanks (with 9.26 million gallons capacity), 2 water treatment plants, 8 wells, 7 stream diversions, and infrastructure to pump water throughout its mountainous region. Maintaining the system while keeping water affordable is a major challenge.

The system's maintenance needs were largely neglected in the decades prior to 2017. In that year, the Board enacted a major rate increase to fund long-term maintenance and capital improvements. Many ratepayers opposed the rate increase, and three board members who voted for the increase were voted out of office in 2018. This possibly explained why previous Boards deferred maintenance despite the long-term problems that would result.

The 2017 rate increase provided the needed revenue for the District to take out

long-term loans and begin a maintenance and capital improvement program, which is now in progress. However, AKEL detailed significant challenges over the next two decades: pipeline improvements, \$57.3 million; storage improvements, \$17.0 million; other improvements, \$1.0 million; *TOTAL: \$75.3 million.*

The deferred maintenance problem is exacerbated by the damages to the system caused by the CZU fire, estimated to be at least \$50 million. The District hopes that most of the costs can be reimbursed by state and federal agencies, but has imposed a 5-year fire surcharge fee (\$9.67/month for residential customers) to defray anticipated shortfalls. Another issue is that recent water usage has fallen significantly short of projections due to the early rains last October and large storms in December. Staff is now anticipating a \$900,000 shortfall in revenues for the current fiscal year. A "rate stabilization" increase may be necessary to recoup some of those losses. The District similarly anticipates future disruptions and costs associated with climate change and droughts, including required contributions toward bringing the Santa Margarita groundwater basin into sustainability as mandated by the State.

How do we address these increased costs while maintaining affordability, particularly for SLV residents with limited incomes? The District should clearly do its utmost to identify both potential cost savings and potential grants, but future rate increases nevertheless appear likely. FSLVW has been at the forefront in promoting the Rate Assistance Program, which provides financial help to those with limited means. A significant expansion of the RAP program needs to be included in discussions as the District addresses these infrastructure needs and costs. FSLVW also supports developing a tiered rate structure so that heavy users, who usually have higher incomes, pay higher rates for heavy usage and thus promote conservation.

# An Update on Fire Management by the SLV Water District

By Larry Ford

Soon we will find our San Lorenzo Valley in another fire season. Our last significant rains arrived in late December and early January, bringing the rainy season total so far to 38 inches (Ben Lomond), which is 80% of the annual recorded average (47 inches). Without significant additional rain in the next couple months to soak the soil, the herbaceous and woody fire fuels might dry enough to further heighten the risk of wildfires. Luckily, we've had no recent wildfires in the valley, no repeat of the winter 2020 or 2021 wildfires, and no further damage to people, property, or infrastructure of the San Lorenzo Valley Water District (SLVWD).

Since our report last December, the SLVWD has accomplished much related to fire resistance and fire fuel reduction. Carly Blanchard, the Water District's Environmental Programs Manager reports that the district has received two fuel reduction grants, has submitted numerous additional grant proposals that have good prospects for funding, and is continuing to cooperate with other SLV agencies and large landowners in addressing critical fire management priorities.

The California Coastal Conservancy grant of \$200,000 last June for fuel reduction was used by the District to clear fuel in defensible space around critical infrastructure, and then either haul away or chip and broadcast the resulting woody debris. The grant of \$480,000 from the California Department

of Forestry and Fire Protection (CALFIRE) through the Resource Conservation District of Santa Cruz County last August was used for additional fuel reduction, redwood plantings, removal of hazardous eucalyptus trees and other invasive plants on Water District lands, and a fuel break along an access road from downtown Boulder Creek to Braemoor Drive.

The Water District has also completed removal of French and Portuguese Broom on approximately 6 acres of the Olympia Watershed with funding from Pacific Gas and Electric Company as part of a riparian mitigation project. This included permitting and planning as well as implementation, and resulted in major fire fuel reduction as well as the ancillary benefits of enhanced habitat for endangered species.

The Water District has recently applied for the following additional grants: 1) CALFIRE's Fire Prevention program for additional fire fuel reduction and fire resistance of structures. 2) Cooperation with the Santa Cruz County FireSafe Council and the Resource Conservation District of Santa Cruz County for structure hardening and education in the San Lorenzo Valley. 3) California Coastal Conservancy's Wildfire Resilience Program for additional fire fuel reduction. 4) Governor's Office of Emergency Services Hazard Mitigation Grant Program for capital improvements to harden structures and pipelines. The Friends of San Lorenzo Valley Water will strive to publicize future progress reports about SLVWD's fire management efforts.



## **FSLVW Leadership Team**

*Mark Dolson (Secretary)*

*Cynthia Dzendzel*

*Larry Ford*

*Peter Gelblum*

*Nancy Macy*

*Jim Mosher (Facilitator, Treasurer)*

*Linda Skeff*

*Lee Summers*

*April Zilber*

## A Small Engineering Team Taking Big Steps Forward

By Mark Dolson

It's often easy for SLVWD ratepayers to take their access to high-quality water for granted. To better appreciate this high level of service, it can be revealing to take a peek at the internal workings of individual departments. The Engineering team is a case in point. The District has recently strengthened its Engineering team. Josh Wolff was hired from a Bay Area engineering firm in January, 2021 as the new District Engineer and team lead, Joel Scianna became Assistant Engineer, and Weston Locke, the new GIS/CAD Specialist. With such a small team, the District is heavily dependent on outside companies to perform most of its infrastructure design, construction, and construction management. Nevertheless, improving the capabilities and processes of the Engineering team can still save a lot of money, and developments over the past year are beginning to bear this out.

The team recently released a Standards Specifications document which provides standard drawings, specifications, and tests for routine installations like fire hydrants. This year-long undertaking addressed a long-standing deficiency in operations. The team similarly set about developing a Computer Aided Design library that allows them to design more efficiently and thereby perform more work in-house, enabling the District to avoid expensive engineering consulting firms for the initial design phase. Another major initiative improves the use of Geographical Information Systems so Staff can easily locate facilities in the field.

The team also expanded the range and quality of the bids it receives from outside companies. In the past, the District often received only a few bids to choose between for each new contract. The new and improved process reaches out to industry contacts and gets many more well-qualified companies to respond. In addition, the District Engineer is working to develop good relationships with his counterparts in the County, the City of Scotts Valley, and Caltrans so that potential issues can be resolved more efficiently and cost-effectively.