

San Lorenzo Valley Water
District
CZU Lightning Complex Fire

WATER SYSTEM AND WATER QUALITY
UPDATE

PUBLIC MEETING

September 03, 2020

Presenters

OVERVIEW

Rick Rogers, District Manager

Email: rrogers@slvwd.com

WATER SYSTEM & OPERATIONS

James Furtado, Director of Operations

Email: jfurtado@slvwd.com

WATER QUALITY

Nate Gillespie, Water Treatment and System Supervisor

Email: ngillespie@slvwd.com

FINANCE & CUSTOMER SERVICE

Stephanie Hill, Director of Finance and Business Services

Email: shill@slvwd.com

OUTREACH & ENVIRONMENTAL ISSUES

Carly Blanchard, Environmental Planner

Email: cblanchard@slvwd.com

CZU Lighting Complex Fire

Since the lightning siege that started on Saturday, August 15, 2020, there have been nearly 14,000 lightning strikes. During this time-period, there have been more than 900 new wildfires across the state, which have now burned over 1.5 million acres. There have 8 fatalities and over 3,100 structures destroyed.

Date Started: 08/16/2020

Cause: Lighting

85,746 Acres Burned

48% Contained, as of today

1,540 Structures Destroyed

1 Fatality

2224 Personnel

Entire San Lorenzo Valley Water District was evacuated



District's Board of Directors held four emergency meetings (8/19; 8/21; 8/24; 8/28) to receive system updates, assess conditions, and take action

- Cooperation with with CAL FIRE
- Emergency water conservation measures
- Emergency spending to restore water facilities as quickly as possible
 - Emergency repairs
 - Additional temporary staffing
 - Engineering consultants

Fire Suppression

- District personnel were in constant contact with fire fighters to assist with response
- Fire Hydrants and portable tanks were used for fighting fire
- Highway 9 Corridor was maintained fully charged with water & pressure for fire fighting from Felton to North Boulder
- Side street water mains were isolated from Highway 9 to maintain water supply for fire fighting



Water Connection Statistics

3,197 Connections Do Not Drink

354 Connections Without Water

Water is projected to be restored by September 12, 2020

Areas Without Water

Projected Water Restoration Date	Location
September 12 th	<ul style="list-style-type: none">• Big Basin Way from Boulder Brook Drive to Brook Lane, West Park Ave from Big Basin to Blackstone Terrace.
September 12 th	<ul style="list-style-type: none">• Upper Ridge Drive Eckley Terrace
September 9 th	<ul style="list-style-type: none">• Sweetwater Lane off Alba Road, Forrest Street Brookdale
September 9 th	<ul style="list-style-type: none">• Alta Via, Upper Monan Way• Blackstone Terrace

Major Damage - Raw water supply lines Foreman, Peavine Sweetwater and Clear Creeks

Replacement of 7.5 miles of raw water supply lines will be challenging

- Limited access
- Time frame to replace
- Type of material
- Damaged trees & Landslide
- Environmental concerns
- Cost
- Constructability -All hand labor



Water Quality

Some of San Lorenzo Valley Water District's service areas have depressurized in the recent fires, and some structures within those areas have burned. When a large portion of a water system depressurizes, various types of contaminants like bacteria, nitrates, and organic chemicals can enter the system.

Water Quality

We know from experience with City of Santa Rosa (2017) and Paradise (2018) water systems that organic chemical contamination (including benzene) can affect fire-damaged water systems that experience pressure loss. Department of Water Resources believes that benzene and other organic chemicals are created by the burning of plastic pipes, other water system components, and structures, and that they can be sucked into the water system when it loses pressure.



Why is there a do not drink order in place?

As a precaution due to widespread depressurization, the State Water Resources Control Board, Division of Drinking Water has advised San Lorenzo Valley Water District to issue a “Do Not Drink-Do Not Boil” notice to the affected areas.

Water Quality Process

We do not currently have any evidence that bacteria, nitrates, benzene, or any other harmful contaminants are present in the San Lorenzo Valley Water District water system. In consultation with the State Water Resources Control Board, Division of Drinking Water, San Lorenzo Valley Water District has begun a sampling program to determine if any service areas are affected by harmful contaminants.



Water Quality Sampling

San Lorenzo Valley Water District is currently collecting samples for bacteria, nitrates, organic chemicals, and other constituents from representative areas in its distribution system and we expect the results of those samples by early next week. Sample results as approved by State Water Resources Control Board, Division of Drinking Water will be posted to our website.



How long will the do not drink order last?

If bacteria, nitrates, benzene, or other harmful contaminants are detected, State Water Resources Control Board, Division of Drinking Water (DDW) and San Lorenzo Valley Water District take actions to inform customers promptly and advise them of what they should do to stay safe.

We do not yet have a definite timeline for lifting the do not drink notice. Before DDW can approve lifting the notice, water quality samples must confirm that the water meets drinking water standards. The notice may be lifted sooner in parts of the system that were less affected by the fire.

Potable Drinking Water

The District has potable drinking water available for residents located in the “do not drink” areas at no charge.

- Water is available at the District’s Operations Building located at 13057 Highway 9 Boulder Creek
- Limit 2 cases of water per day
- On a limited basis the District can deliver water to customers who are not able to pick up water at the Operations Building. Please email customerservice@slvwd.com or call 831-338-2153 during regular business hours.



Damage

All 7.5 miles of the District Raw Water Supply lines were destroyed by fire.

Surface Water Treatment Plant was shut down before fire reached supply lines protection the treatment plant from contamination.

Currently water supply is being pumped from the District groundwater wells located in Ben Lomond.

Emergency intertie with our Felton system is operational supplying water from Fall Creek through the District's Felton Kirby Water Treatment Plant



Over 50% of the District water storage is located in Boulder Creek at the Lyon surface water treatment plant.

Transmission water mains between the large tanks (4.5 million gallons) was destroyed by fire draining the tanks.

Construction crews are in the process of installing new piping and the tanks are scheduled to be back in service by September 12, 2020.

Not only were raw water supply lines destroyed, raw water operational turbidity monitoring and water pressure centralizing chamber was destroyed.



Repairs are underway,
material procurement
was slow in the
beginning and now
material are arriving.
Several areas required
the replacement of
water tanks due to fire
damage.



Repairs difficult due to steep topography and lack of access

Fire impacted high reaches of the District.

To maintain gravity pressure, facilities are located in the higher reaches.

Fire burned down the Ben Lomond Mountain reaching facilities.

Blackstone Terrace required a crane to place new tanks.



Damage Summary

- 7.5 Miles Raw Water Supply Line
- Treated water lines between 3 major tanks
- Foreman Creek Turbidity station and pressure reducing station
- Riverside Grove Tank & Booster PG&E drops, and SCADA control
- Bull Spring Raw Water Line
- South Res piping from tanks to booster pump 2,500 lineal feet
- Alta Via & Monan Way transmission mains
- Eckley Tank, Booster Pump, transmission main, SCADA Control, and PG&E drop
- Blackstone Tank and associated plumbing
- Bull Spring raw water supply line
- Foreman, Peavine, Sweetwater Clear Creek intakes

Other Damage

- Water Meters: 200
- Equipment Loss: 2 Trailer mounted air compressors, 45kw Emergency Generator, standby pumps, lawn mower, 3 sampling stations and Construction box



Recovery/Replacement Costs

The District is still assessing damage and estimating costs associated with rebuilding the water system.

Watershed Ben Lomond Mountain – Empire Grade

- District Ben Lomond Mountain Watershed 1,620 acres burned
- Working on post-fire restoration of the District's watershed lands. Staff met with the County of Santa Cruz, Cal Fire's Watershed Emergency Response Team (WERT), and its registered professional forester (rpf) to tour the Ben Lomond Mountain properties and the 5-mile pipeline to assess tree damage and soils. Assessments will be used to develop a restoration plan, and help the County and Cal Fire to map and prioritize areas for erosion control.
- The District's fire management plan will incorporate post-fire recovery
- Cal Fire CFIP grant to cover 90% of the establishment of a forest management plan – then can apply the following year for implementation

Surface Water Supply

Approximately 50% of the District's water supply is surface water.

- When summer stream flows drop off, well water is used to supplement water supply.
- In winter, wells are shut down allowing for recharge (rest) to ensure the District does not over pump aquifers.
- Emergency restoration of the Forman Creek Surface Water Intake is moving forward.



Finance

- The District has approximately \$3M in reserves to help finance normal operations and emergency repairs.
- The District is working with FEMA and Cal OES for emergency funding for the repairs to our infrastructure damage
- The District will try and find any other grant funding available as well.
- Multiple financial institutes are ready to supply the bridge funding to get these projects complete.
- The District will work with our insurance company for any facilities and equipment that are covered.
- It is unknown at this point if any additional recovery rates will be needed.

Customer Service

- If you are concerned your home is in a Do Not Drink Do Not Boil area, but need confirmation, you can contact customer service with your address.
- The District is waiting for more test results before we will establish where potable water will be available for potential long term use.
- Late fees are suspended at least thru the month of September.
- The District has a policy for if your home was destroyed.
- But at this point all other customers will continue to receive regular bills.
- Payment processing has been delayed. If you mailed in a check and have not seen it clear yet, we hope to have these processed by next week.

Questions