



**County of Santa Cruz**  
Water Advisory Commission  
701 Ocean Street, Room 312 ❖ Santa Cruz, CA 95060  
(831) 454-2022 ❖ <https://www.scceh.org/>

---

## AGENDA

### SANTA CRUZ COUNTY WATER ADVISORY COMMISSION

**Wednesday June 7, 2023, 4pm**

This meeting will be held in hybrid format. Commissioners are expected to attend in person.

In-Person: 701 Ocean Street; Third Floor Training Room (directly above the stairs)

Remote: [Click here to join the meeting](#) Meeting ID: 219 425 929 30 Passcode: nUJNtM

**A. OPENING**

1. Call to Order

Commissioner Lego will be attending from 100 Glenview Place, Naples, FL 34108

2. Roll Call

**B. APPROVAL OF MINUTES: April 5, 2023**

**C. PUBLIC COMMUNICATIONS**

Opportunity for the public to comment on items under the purview of the Water Advisory Commission but not on today's agenda.

**D. COMMISSIONERS' REPORTS**

**E. STAFF REPORTS AND ANNOUNCEMENTS**

**F. NEW BUSINESS**

1. Proclamation for Chris Berry honoring 19 years of exemplary service on the Water Advisory Commission

2. City of Santa Cruz Water Department and San Lorenzo Valley Water District Sanitary Survey Results

Presentation by Zeke Bean of the City of Santa Cruz

**G. UNFINISHED BUSINESS and UPDATES**

1. Drought Response Update

Tour of new webpages outlining services:

<https://scceh.com/NewHome/Programs/WaterResources/droughtresponse.aspx>

2. Well Ordinance Update Process

Oral report

3. Groundwater Sustainability Agencies Update

Oral reports outlining updates from the three GSAs in the County.

**H. CORRESPONDENCE**

None

**I. BOARD OF SUPERVISORS ACTION ON ITEMS AFFECTING WATER:**

None

**J. ITEMS OF INTEREST**

1. DWR Aerial Electromagnetic Surveys Data website:

<https://data.cnra.ca.gov/dataset/aem>

2. Santa Cruz Sentinel, May 16, 2023 *Water agencies work collaboratively on community resources* <https://www.santacruzsentinel.com/2023/05/16/guest-commentary-bruce-mcpherson-fred-keeley-and-mark-smolley-water-agencies-work-collaboratively-on-community-resources/>

**K. AGENDA ITEMS FOR FUTURE MEETINGS**

**L. ADJOURNMENT**

HONORING CHRIS BERRY  
FOR 19 YEARS OF SERVICE ON THE SANTA CRUZ COUNTY WATER  
ADVISORY COMMISSION

WHEREAS, Chris Berry's distinguished tenure on the Santa Cruz County Water Advisory Commission ended on April 1, 2023; and

WHEREAS, Chris was appointed to the Commission to represent the large water utilities in 2004, since which time his leadership helped set the direction of the Commission, particularly during the terms he spent as Chair and Vice Chair; and

WHEREAS, Chris has always provided the Commission with good information and engaged staff in dialogue that provided his colleagues with insight on issues of importance to the Commission, particularly with respect to the City of Santa Cruz, the San Lorenzo River, and fisheries; and

WHEREAS, Chris spearheaded the workplan for the Water Advisory Commission and guided efforts to focus on important, concrete issues which included studying and ultimately protecting karst features; and

WHEREAS, his inter-commission coordination activities helped to increase communications with the Fish and Wildlife Advisory Commission and the Commission on the Environment and led to several special inter-commission meetings, bringing alignment to the work of the bodies; and

WHEREAS, Chris has served with integrity, patience, and generosity through two decades, working closely with a parade of different County staff members and Commissioners; and

WHEREAS, Chris is a considerate, motivated and dedicated colleague who champions the best interests of fish, wildlife, water resources, and the community, and his expertise will be greatly missed.

NOW, THEREFORE, I, Justin Cummings, District 3 Supervisor, join with the Water Advisory Commission in thanking Chris Berry for 19 years of exemplary service to the residents of Santa Cruz County and honor his significant contributions to the field of Water Resources Management.

June 7, 2023

# 2023 San Lorenzo River and North Coast Watersheds Sanitary Survey Update



# Our Water, Our Future



*A watershed sanitary survey is a detailed evaluation of surface water sources and an assessment of vulnerability of watershed lands and waterways to contamination that could affect source water quality*



# Background

## CDM Camp Dresser & McKee Inc.

environmental  
services

One Walnut Creek Center  
100 Pringle Avenue, Suite 300  
Walnut Creek, California 94596  
Tel: 925 933-2900 Fax: 925 933-4174

July 10, 1996

Mr. Richard Lee  
Water Quality Project Manager  
Santa Cruz Water Department  
City of Santa Cruz  
715 Graham Hill Road  
Santa Cruz, California 95060

Subject: *San Lorenzo Valley and North Coast Watersheds  
Sanitary Survey Final Report*

Dear Mr. Lee:

Camp Dresser & McKee Inc. (CDM) is pleased to submit the final report for the *San Lorenzo Valley and North Coast Watersheds Sanitary Survey*. This report provides a comprehensive evaluation of existing conditions, management practices, and contaminant sources in the subject watersheds. The key recommendations are:

- Augment current water quality monitoring programs including raw water coliform bacteria sampling and routine data analysis.
- Increase watershed surveillance and inspections to stop unauthorized and other problematic activities which adversely influence water quality.
- Complete a confined animal facility program to identify best management practices which will minimize contamination in runoff from these sites.
- Coordinate efforts among participating agencies and water purveyors to implement watershed management and protection practices.

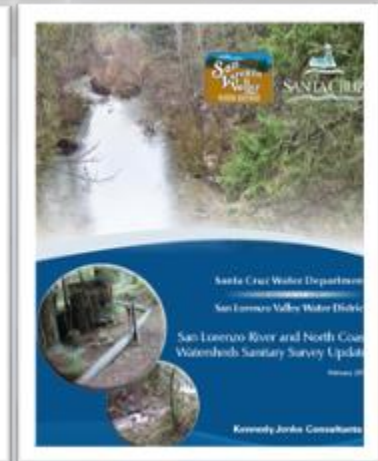
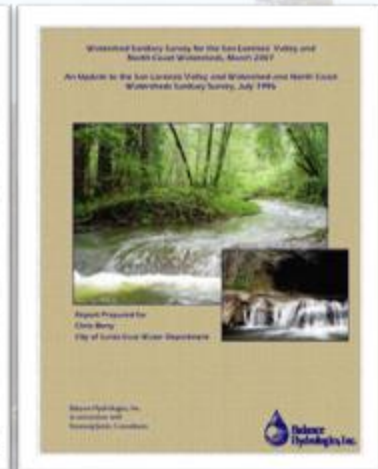
CDM sincerely appreciates the valuable contributions and assistance of the Santa Cruz Water Department staff and all participating utilities and agencies in conducting this study.

Very truly yours,

CAMP DRESSER & MCKEE INC.

  
Paul Meyerhofer, P.E.  
Project Manager

  
Steve Price, P.E.  
Project Engineer



# 2023 Update

## *Partners*



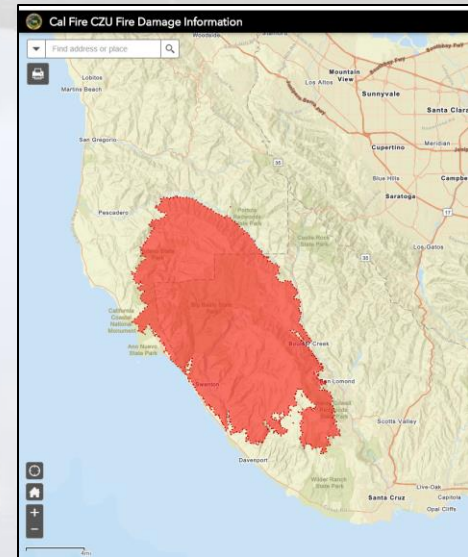
# 2023 Update

## Findings and Recommendations

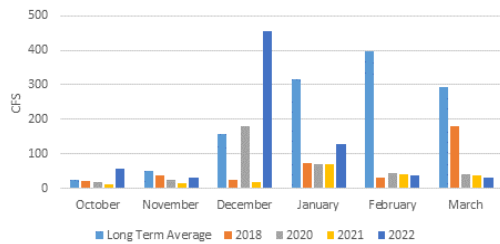
Key changes since 2017



<b>ELEVATION:</b> (reservoir spills at 577.15 ft)	
🌊 Currently:	552.05ft
🌊 Last year:	570.00ft
<b>SEASONAL RAINFALL:</b> (inches)	
💧 For the past week:	0.00
💧 This week last year:	0.00
💧 For the season:	20.19
💧 This point last season:	28.96



Dry/Critically Dry Fall and Winter Mean Stream Flow at Big Trees Gage

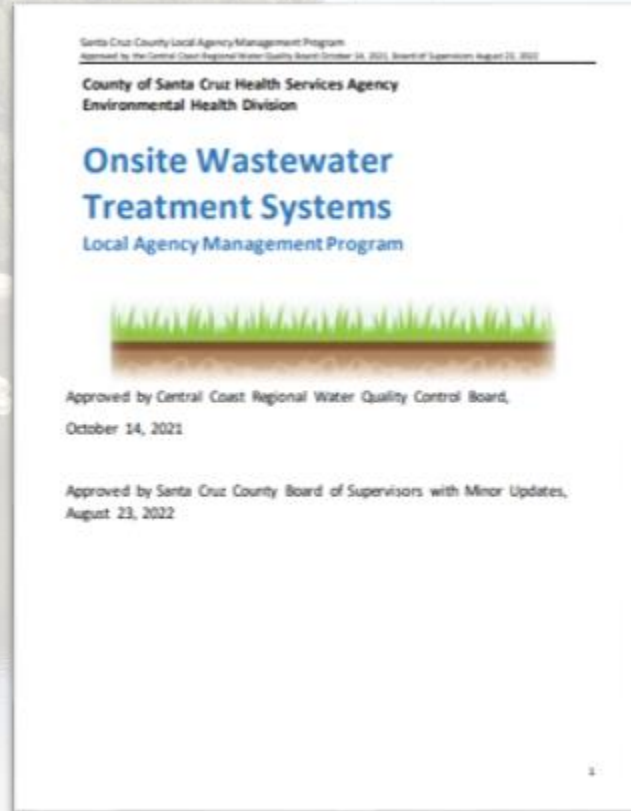




# 2023 Update

## *Findings and Recommendations*

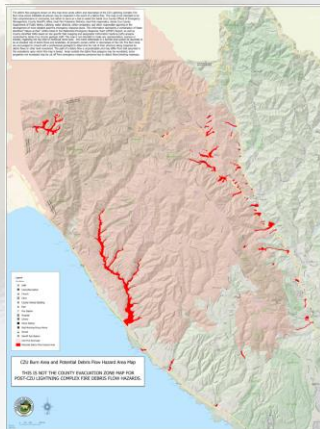
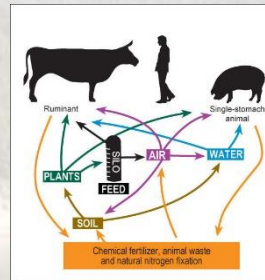
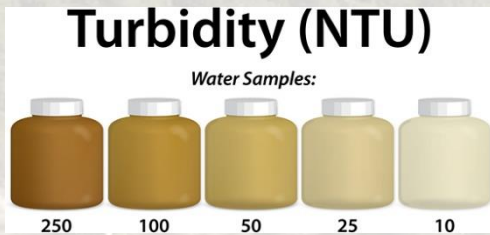
*Key changes since 2017*



# 2023 Update

## *Findings and Recommendations*

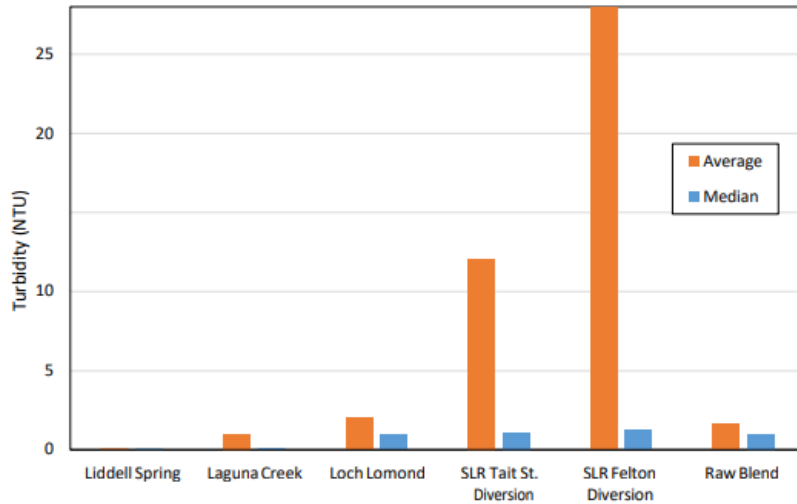
*Contaminant Groups, significant sources, and contributing factors*



# 2023 Update

## Findings and Recommendations

### Sediment and Turbidity



Average and median source water turbidity data for WY 2021

Table 5-2: Turbidity Results for SLVWD (Unit: NTU)

Year	Bennett Spring	Bull Spring #1	Bull Spring #2	Clear Creek	Fall Creek	Foreman Creek	Peavine Creek	Sweetwater Creek	Lompico Creek
2017	0.28	0.31	1.1	3.2	4.7	< 0.10	1.1	5	NR
2018	0.31	0.38	0.68	N/A	0.61	N/A	N/A	N/A	NR
2019	0.25	0.35	0.4	0.4	1.3	0.3	0.5	0.9	NR
2020	0.4	0.7	0.4	0.1	2.125	3.92	0.4	0.45	NR
2021	0.15	< 0.10	0.1	0.4	0.7	0.875	0.3	0.45	NR

Source: SLVWD

Note: NR = Not Recorded; N/A = Data not available

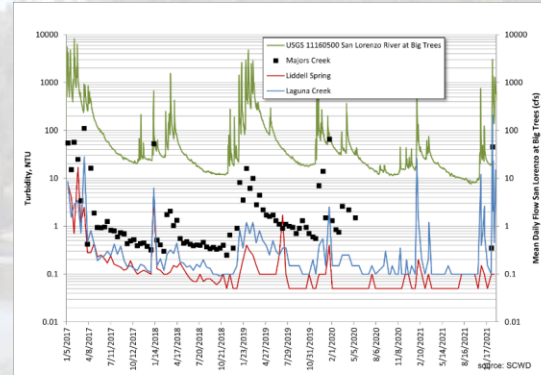


Figure 5-5

Turbidity in SCWD's North Coast Sources, 2017-2021

Turbidity data is collected at varying intervals. Mean daily flows from San Lorenzo River at Big Trees are shown for reference to sediment transport conditions. Majors Creek was off line from May 2020 - November 2021.

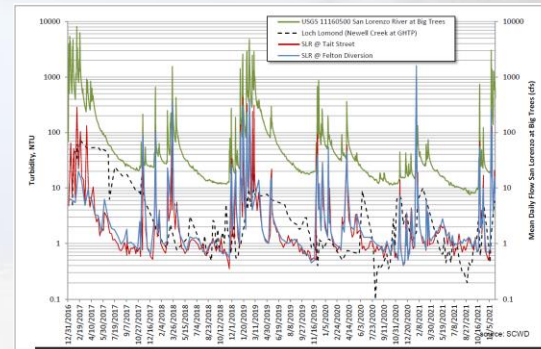


Figure 5-4

Turbidity in SCWD's San Lorenzo River Sources, 2017-2021

Turbidity data is collected once or twice a month. Mean daily flows from San Lorenzo River at Big Trees are shown for reference to sediment transport conditions.

# 2023 Update

## Findings and Recommendations

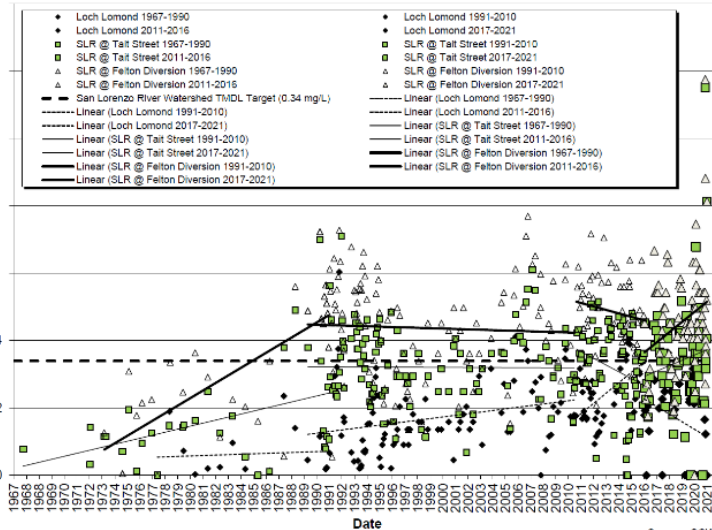
### Nutrients

Utility/Location	Nitrate (mg/L as N)				No. of Samples	Water Year	
	Average	Median	Low	High		From	To
<b>Santa Cruz Water Department<sup>1</sup></b>							
Liddell Spring	0.3	0.2	0.2	0.3	32.0	2017	2021
Laguna Creek	0.0	0.0	0.0	0.2	36.0	2017	2021
Majors Creek	0.2	0.3	0.0	0.4	18.0	2017	2021
Loch Lomond	0.2	0.2	0.0	0.4	31.0	2017	2021
SLR @ Tait Street	0.3	0.3	0.0	1.2	78.0	2017	2021
SLR @ Felton	0.5	0.5	0.0	1.2	77.0	2017	2021
<b>San Lorenzo Valley Water District<sup>2</sup></b>							
	<b>YEAR</b>						
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Bennett Spring	< 0.10	0.13	< 0.10	N/A	0.13	< 0.10	< 0.10
Bull Springs-1	0.11	< 0.10	< 0.10	N/A	0.15	< 0.10	0.12
Bull Springs-2	NR	NR	< 0.10	N/A	0.12	< 0.10	0.25
Clear Creek	< 0.10	< 0.10	< 0.10	N/A	< 0.10	< 0.10	< 0.10
Fall Creek	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	N/A	< 0.10
Foreman Creek	< 0.10	< 0.10	< 0.10	N/A	< 0.10	< 0.10	< 0.10
Peavine Creek	< 0.10	< 0.10	< 0.10	N/A	< 0.10	< 0.10	< 0.10
Sweetwater Creek	< 0.10	< 0.10	0.15	N/A	0.14	0.17	0.13
Lompico Creek	ND	ND	NR	NR	NR	NR	NR

<sup>1</sup>Source: City

<sup>2</sup>Source: SLVWD, 2017 data is 6 months Note: NR = Not Recorded; N/A = Data not available; ND = Non-detectable

SLR = San Lorenzo River



**Figure 5-10** Nitrate Concentrations in the SCWD San Lorenzo River Sampling Sites, 1967-2021  
Numbers in parenthesis are median values.  
Trend lines drawn for each site based on a linear best fit.

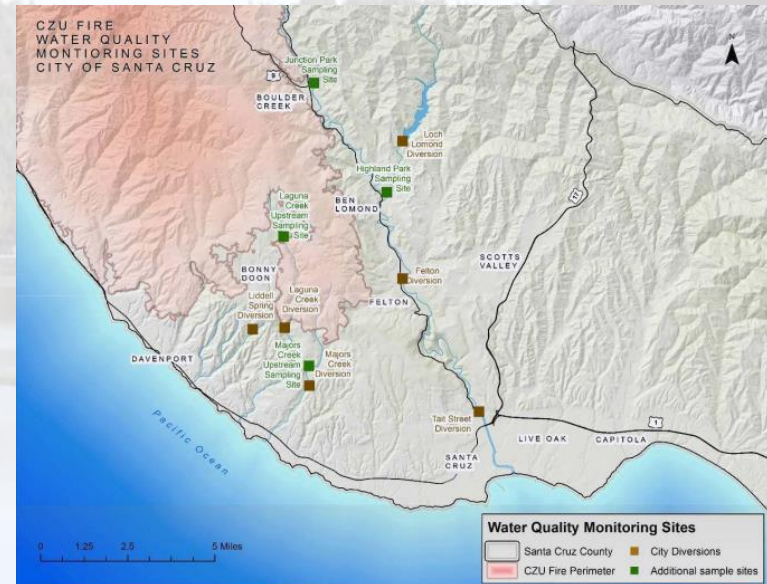
# 2023 Update

## Findings and Recommendations

### Contaminants of Emerging Concern

WY 2021 Source Water Monitoring Program Storm Event Sampling Frequency								
Water Quality Parameter	Laguna Creek	Liddell Spring	SLR Felton Diversion	SLR Tait St. Diversion	SLR Highlands	Upper Laguna Creek	SLR Junction	Upper Majors
Volatile Organic Compounds	X		X	X	X	X	X	X
Synthetic Organic Compounds	X		X	X	X	X	X	
Radiological	X		X	X	X	X	X	
Inorganics	X		X	X	X	X	X	X
Anions			X	X	X		X	
General Physical	X	X	X	X	X	X	X	X
Metals	X		X	X	X	X	X	X
MBAS	X		X	X	X	X	X	X
TOC/DOC	X	X	X	X	X	X	X	X
UV254/SUVA	X	X	X	X	X	X	X	X
TSS	X	X	X	X	X	X	X	X
Asbestos	X		X	X	X	X	X	X
Microbial Profile			X	X				
Total Coliform/ <i>E. coli</i>	X	X	X	X	X	X	X	X
Enterococci	X	X	X	X	X	X	X	X
PFAS/PFOS	X		X	X	X	X	X	
CEC	X		X	X	X	X	X	
Bromide	X		X	X	X	X	X	X
Dioxin/Furan	X		X	X	X	X	X	X

X indicates that samples were collected



Water Year WY 2021 Storm Event Sampling Plan

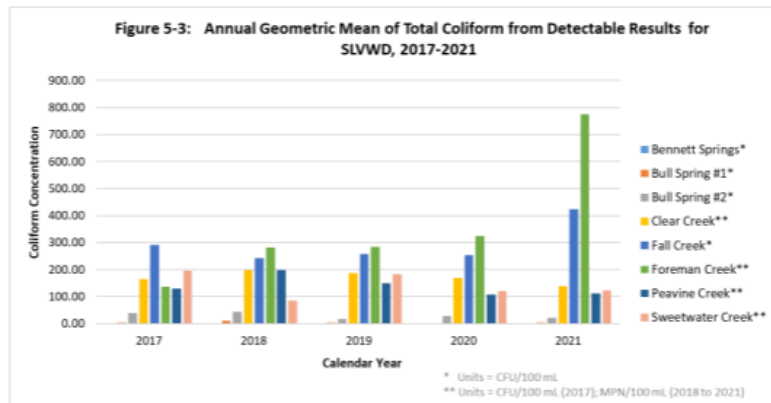
Analytes	Acronym	California Notification Level (ppt)	10/06/21		10/21/21		10/25/21	10/27/21		11/02/21		11/03/21		11/09/21	
			SLR Tait St. Diversion	SLR Felton Diversion	SLR Tait St. Diversion	SLR Felton Diversion	Laguna Creek	SLR Tait St. Diversion	SLR Felton Diversion	SLR Tait St. Diversion	SLR Felton Diversion	SLR Tait St. Diversion	SLR Felton Diversion	SLR Tait St. Diversion	SLR Felton Diversion
Perfluorobutanesulfonic acid	PFBS	500				2.2	2.5	3.0	2.6	2.1	2.2	2.1	2.0		2.1
Perfluorooctanesulfonic acid	PFOS	6.5	2.2	2.3	4.2	4.7				3.1	2.3	2.0	2.0	4.0	3.2
Perfluorooctanoic acid	PFOA	5.1			2.6	3.0		2.5	2.1	2.9	2.0		2.0	2.5	2.3

Summary of Per- and Polyfluoroalkyl Substances (PFAS) Measured in Source Waters and Finished Water between October 1, 2021 and November 31, 2021. All results are reported in parts per trillion (ppt)

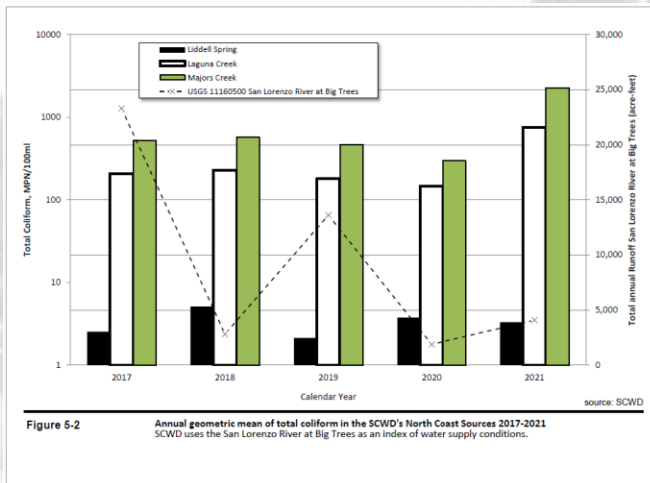
# 2023 Update

## Findings and Recommendations

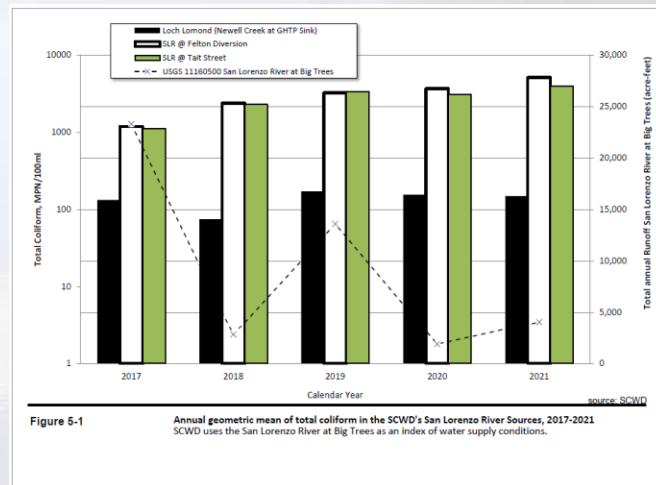
### Pathogens



**Figure 5-3: Annual Geometric Mean of Total Coliform from Detectable Results for SLVWD, 2017-2021**



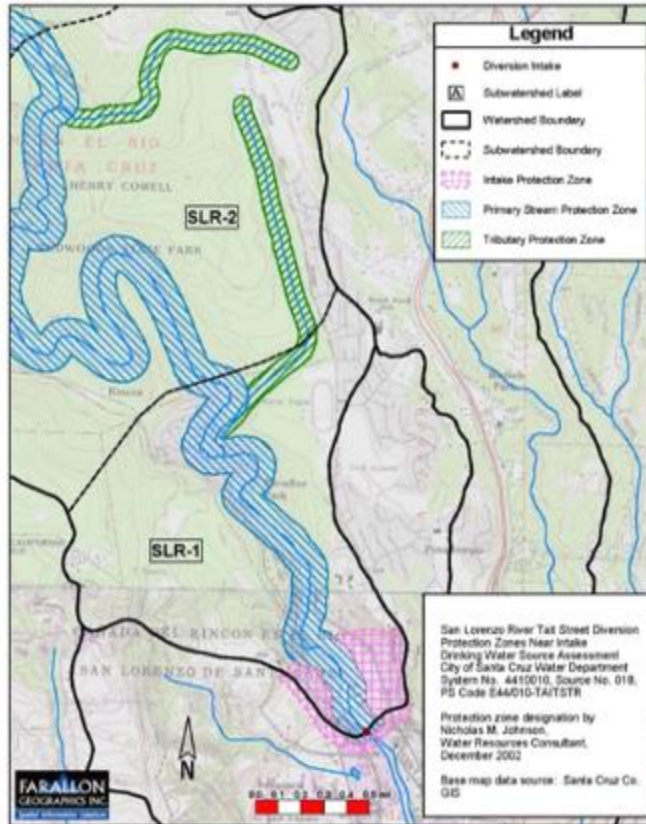
**Figure 6-2: Annual geometric mean of total coliform in the SCWD's North Coast Sources 2017-2021**  
 SCWD uses the San Lorenzo River at Big Trees as an index of water supply conditions.



**Figure 5-1: Annual geometric mean of total coliform in the SCWD's San Lorenzo River Sources, 2017-2021**  
 SCWD uses the San Lorenzo River at Big Trees as an index of water supply conditions.

# Source Water Protection

## *Riparian Protection and Restoration*



### San Lorenzo River Riparian Conservation Program



May 2018

Developed by:

City of Santa Cruz Water Department  
Coastal Watershed Council  
County of Santa Cruz Water Resources Division  
Resource Conservation District of Santa Cruz County  
San Lorenzo Valley Water District

With assistance from:  
Conservation Collaborative  
[conservco88@gmail.com](mailto:conservco88@gmail.com)

# Source Water Protection Outreach and Education



**EIGHTH ANNUAL**  
**State of the San Lorenzo River Symposium**

**March 18**  
9 AM - 12 PM

**A Tale of Two Rivers:**  
*The past, present, and future of "Atmospheric Rivers" and other climate events in the San Lorenzo River Watershed*

**Symposium**  
London Nelson  
Community Center  
301 Center St.  
Santa Cruz, CA 95060

**Topics include:**

- Extreme weather and historical flooding impacts
- The new San Lorenzo River lagoon flood control structure
- Sea level rise and salinity studies
- Large woody debris projects and winter storm response efforts
- Updating the Drinking Water Watershed Sanitary Survey
- Impacts of the derivative gPPO-Quinnone on steelhead and salmon

**THIS EVENT IS FREE!**  
Refreshments provided - bring your coffee cup!

Learn more at [tinyurl.com/sostra](http://tinyurl.com/sostra).

[cityofsanacruz.com/water](http://cityofsanacruz.com/water)



# Source Water Protection *Stakeholder Engagement*



# Source Water Protection

## *Regulator Engagement*



# Source Water Protection

## Policy Maker Engagement



  
SANTA CRUZ  
WATER DEPARTMENT  
353 Everett Street, Suite A, Santa Cruz, CA 95060 • 831.426.4208

Central Coast Water Board  
Attn: John Inman  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

October 7, 2021

**Subject: Comments - 2021 Triennial Review of the Water Quality Control Plan for the Central Coastal Basin**

Dear John Inman and Central Coast Water Board Staff,

The City of Santa Cruz Water Department appreciates the opportunity to comment on the 2021 Triennial Review of the Water Quality Control Plan for the Central Coastal Basin. As a domestic drinking water provider to over 36,000 customers served primarily by surface water, the City of Santa Cruz Water Department is very interested in the current Basin Plan review process. Please consider the following comments as you proceed.

**Brief Issue Descriptions, Issue 26: Revise Storm Season Start Date to October 1**

Regarding the revision of the storm season start date to October 1, while the City supports a policy that compels project sites to be prepared for early season rains, an October 1st start date is inconsistent with several TMDLs and with other state agencies' standards. An October 15th or November 1st start date would allow for flexibility and would be better aligned with our changing climate, where significant rains prior to November are an increasingly rare occurrence. A later date would also spare many organizations from having to use extra resources on preparation and revision of writer operation plans which are generally unnecessary since projects are often completed in mid-October.

**Create site-specific turbidity and pathogen objects extending 5-miles upstream of the City's San Lorenzo River surface water diversion at Tail Street**

As the San Lorenzo River is the primary water source for the City of Santa Cruz, we would like increased focus on protecting the Municipal and Domestic Supply (MUN) beneficial uses that are currently incorporated into the basin plan. To better protect the MUN beneficial uses we suggest lowering acceptable turbidity and pathogen levels for reaches upstream of the main diversion near Crossing Street in the City of Santa Cruz: <https://www.santacruzwater.org/Portals/0/2021%20Triennial%20Review%20of%20the%20Water%20Quality%20Control%20Plan%20for%20the%20Central%20Coastal%20Basin.pdf> with site specific objectives. For instance, using a value of 15 NTU, which is in between the secondary MCL for turbidity of 5 NTU and the 25 NTU regional value, for 5 miles upstream of the diversion would be useful to regulate discharges in addition to helping meet annual load targets of the sediment TMDL.

Winter water from the San Lorenzo is rapidly becoming more important to municipal use in terms of groundwater recharge projects. Having the pathogen and turbidity standards applied for this reach on a year-round basis will further protect MUN beneficial uses. It is our position



Thank you



San  
Lorenzo Valley  
WATER DISTRICT

Our Water, Our Future

