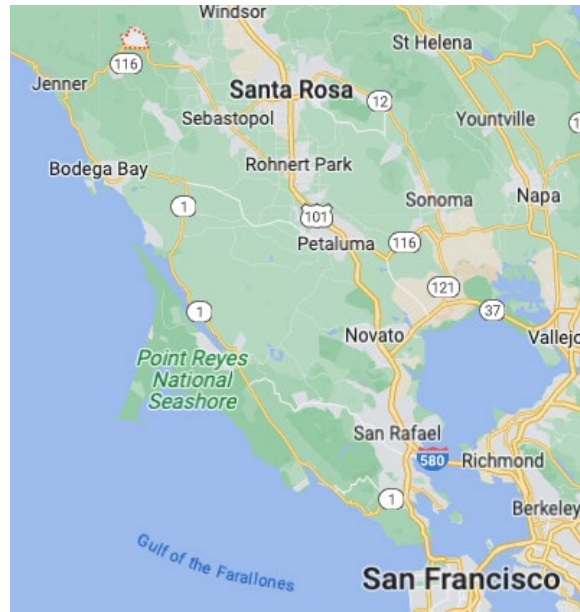


Understanding Tap Water Perceptions and Drinking Behavior in Guerneville, CA



David Thai, D.D.S.
Sonoma County
Wednesday, May 22, 2024



Intro

Dental Director,
West County Health Centers

- Dental Clinics in Guerneville & Sebastopol CA

Federally Qualified Health
Center (FQHC)

- Serving over 10,000 patients in rural western Sonoma County across 10 sites

Patients n = 11,097	
<i>Race/Ethnicity</i>	
African American/Black	126 (1.1%)
Asian/Asian American	109 (1.0%)
Hispanic/Latino	1765 (15.9%)
Native Peoples	52 (0.5%)
Pacific Islander	43 (0.4%)
White	7503 (67.6%)
Multi-racial	355 (3.2%)
Other	1144 (10.3%)
<i>Gender</i>	
Male	2782 (25.1%)
Female	4075 (36.7%)
Trans	105 (0.9%)
Undisclosed	195 (1.8%)

Background

Concerns About Tap Water Quality in Guerneville, CA

- Residents express apprehensions regarding the quality and consumption of Guerneville's tap water and access to drinking water.
- Low intake of plain drinking water has been associated with several health-related behaviors, including hypertension, higher body mass index, and dental decay.

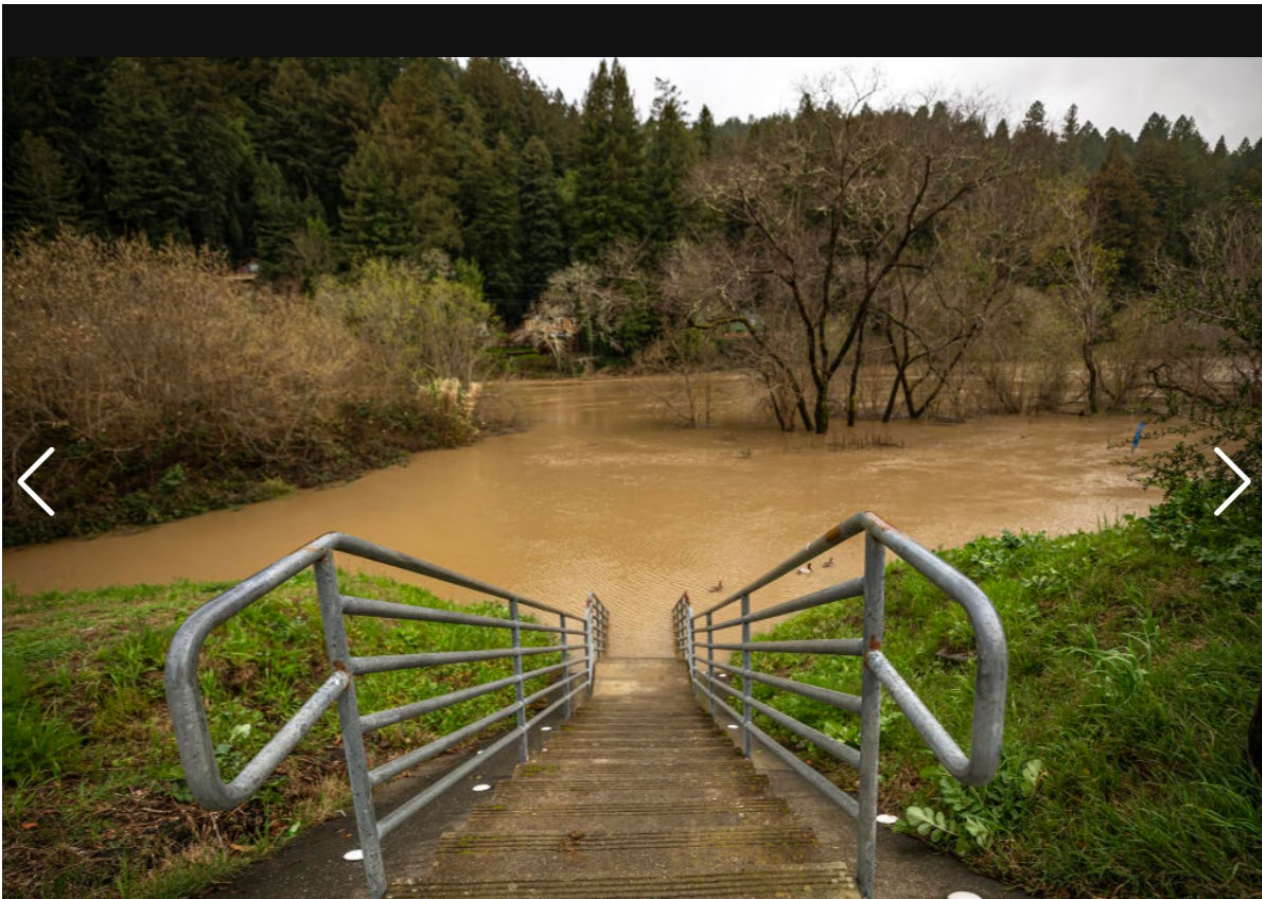
Current Clinical Practices

- 87% of residents' water source is from *Sweetwater Springs Water District*
- 13% of residents' water is from well water on their property
- The Russian River County Sanitation District, operated by Sonoma Water to treat wastewater, serves Guerneville

Partially treated wastewater spills into Russian River after treatment plant power outage

Sonoma Water says rain-swollen Russian River quickly diluted spill between Guerneville and Monte Rio. Spill occurred March 1 and 2 after restoration of power at treatment plant reset equipment valves and caused overflow.

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COUNTY OF SONOMA

Spill of partially treated wastewater at Russian River County Sanitation District Treatment Plant

SANTA ROSA, CA | March 07, 2024

Close to Home: Wastewater to the tap? No thanks

California water regulators assert that new technology makes wastewater safe to drink. | 8

BRENDA ADELMAN

BRENDA ADELMAN CHAIRS THE RUSSIAN RIVER WATERSHED PROTECTION COMMITTEE.

January 14, 2024

 Gift this article to a friend

Action requested

If you receive an envelope (like the one shown here) in your mailbox or on your door, please fill out the income survey inside and return it using the self-addressed stamped envelope. A large response rate is required for the survey to be considered valid.

Surveys will be mailed to households the last week of February 2024.

This survey will be conducted by the Rural Community Assistance Corporation (www.RCAC.org). Your responses to this survey will be kept anonymous. No personal identifying information will be reported in the survey results. All respondents' personal information will remain confidential.

Russian River County Sanitation District

WE NEED YOUR HELP!

RESIDENT SURVEY



Proposed Intervention

Conduct cross-sectional study to understand tap water perceptions and drinking behavior in Guerneville, CA

Convene Community Stakeholders' Meeting to determine community locations to install accessible filtered water stations

Advocate for state policy change to allow sewage spill penalty money to be used towards repairs and maintenance of Guerneville's water infrastructure

Overview of Intervention

OBJECTIVE:

To understand the association between tap water quality perceptions, primary drinking water source, and beverage consumption in Guerneville, CA in order to guide interventions to improve water consumption in the community, supporting water to be a beverage consumed over sugar-sweetened beverages.

Survey Demographics (n=141)

Age

18-24	15 (10.7%)
25-44	47 (33.6%)
45-64	60 (42.9%)
65+	18 (12.9%)

Gender

Male	60 (42.9%)
Female	78 (55.7%)
Other	2 (4.7%)

Race/Ethnicity

White only	51 (36.2%)
Hispanic only	71 (50.4%)
Other	4 (2.8%)
2 races or more	9 (6.4%)
Prefer not to say	6 (4.3%)

Survey Demographics (n=141)

Education

<i>Less than or some high school, no diploma</i>	37 (26.62%)
<i>High school graduate or the equivalent (GED)</i>	60 (43.2%)
<i>Associate Degree, Trade/Technical/Vocational Training</i>	22 (15.8%)
<i>Bachelor's degree</i>	12 (8.6%)
<i>Master's degree</i>	8 (5.8%)

Home Ownership Status

<i>Privately-Owned</i>	41 (29.9%)
<i>Renter</i>	84 (61.3%)
<i>No permanent residence/transitory</i>	12 (8.8%)

Employment Status

<i>Full-time outside the home</i>	62 (45.9%)
<i>Full-time from home</i>	6 (4.4%)
<i>Hybrid part-time at home and outside home</i>	17 (12.6%)
<i>Currently seeking employment</i>	11 (8.5%)
<i>Retired</i>	19 (14.1%)
<i>Student</i>	4 (3.0%)
<i>Prefer not to say</i>	16 (11.9%)

Survey Demographics (n=141)

<i>Home Water Source</i>	Total	Tapwater from home	Bottled Water, Outside Home
<i>Municipal Water Company</i>	110 (79.1%)	53 (48.2%)	57 (51.8%)
<i>Well/Spring</i>	22 (15.8%)	9 (40.9%)	13 (59.1%)
<i>No permanent residence/transitory</i>	7 (5.0%)	0	7 (100%)

<i>Uses Filtration Device at Home</i>	Total	Tapwater from home	Bottled Water, Outside Home
<i>Yes</i>	60 (44.1%)	45 (75.0%)	15 (25.0%)
<i>No</i>	76 (55.9%)	16 (21.1%)	60 (78.9%)

Key Findings

- Non-Tap Water users tend to consume more Bottled Water and have higher Sugar-Sweetened Beverages (SSB) intake.
 - 52% never or rarely consumed Tap Water
 - 53% consumed bottled water everyday
 - 60% mistrust Tap Water as safe to drink
- Education level predicts Tap Water usage
- Renters & lower income individuals are less likely to install home water treatment devices, which is a major predictor.
- 57% of Tap Water drinkers employ carbon filters.
- Increase in SSB consumption linked to grocery stores frequently running of Bottled Water.

Water Project Team Origin Story Timeline

1/9/23: Met with Laurel Chambers as part of UCSF Champion Provider Fellowship Program application

1/10/23: Meeting with Andrea Pickett & Laurel Chambers

1/27/23: Collaborated on nutrition classes with LHD

2/13/23: Accepted to UCSF Champion Provider Fellowship 2023 cohort

3/23 – 7/23: Met once a month with LHD to discuss and design PES under Healthy Food and Beverage Standards

7/25/23: Andrea Pickett asked if we were interested in mentoring a UCSF Dental Public Health Resident, Dr. Lauren Gritzer

7/26/23: Decided that Dr. Gritzer is a great fit to join our Water Project

8/4/23: Andrea Pickett promoted and connected us with Ariel Thomas-Urlik to resume Water Project

8/28/23: Lisa Steinman with LHD joined team

9/23-1/23: Survey Design, IRB outcome exemption letter received on 1/23/24

2/5/23-4/05/23: Surveys Distributed & Completed, \$5 Safeway incentive gift cards were given courtesy of LHD

4/5/23 to present: Survey Analysis Completed

Partnerships



Andrea Pickett, MPH
Ariel Thomas-Urlik, MPH
Laurel Chambers, MPH
Lisa Steinman



Lauren Gritzer, DDS, MPH
Kristin Hoeft, MPH, PhD
Cristin Kearns, DDS, MBA, PhD
Christina Hect, PhD



Jennifer Hazard
Stephanie Villegas



Jeff Hughes

Current Policies

- State rules do not allow sewage spill penalty money to be used toward repairs and maintenance of Guerneville's water treatment system, even though it was recently determined that \$48.3 million is needed to improve and maintain Russian River County Sanitation District water treatment infrastructure
- Proposition 218 – Russian River County Sanitation District
- Sanitation Rate Relief Program

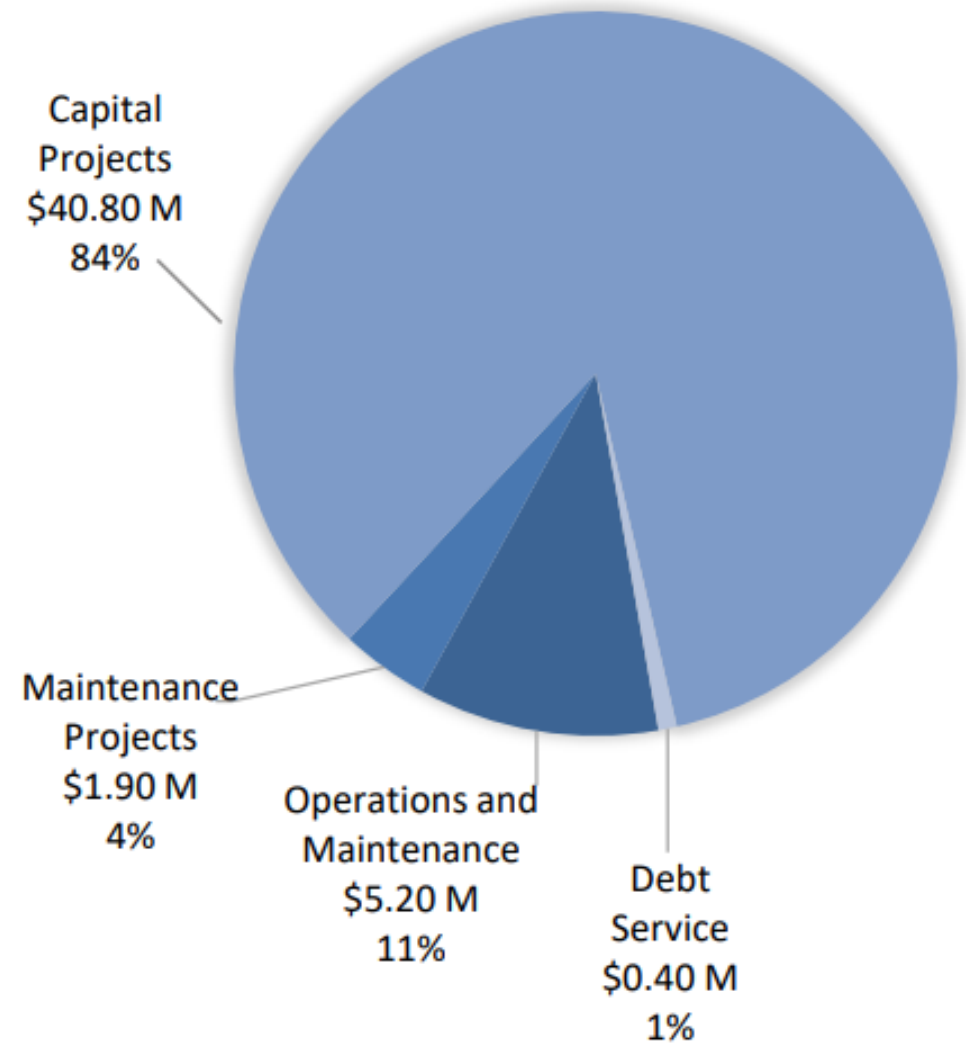
FY 2024-2025 Budgeted Expenditures \$48.30 Million

Capital Projects – \$40.80 Million

- Treatment Plant, Lift Station, and Force Main Pipeline Upgrade Project
- Underground Storage Tank Removal and Replacement

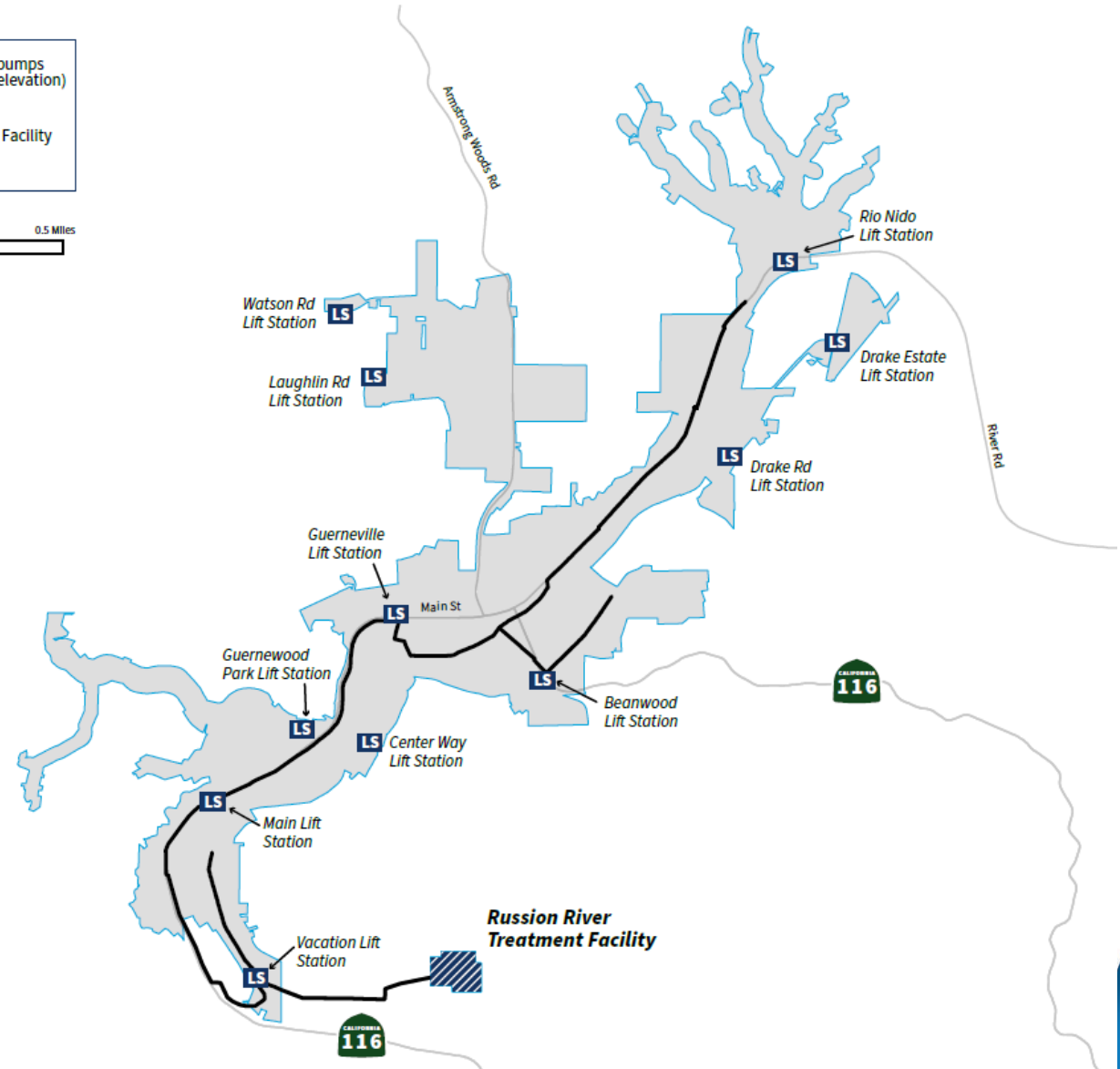
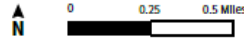
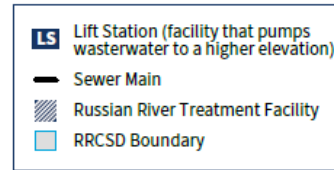
Maintenance Projects – \$1.90 Million

- Arc Flash Studies
- Pump, Valves, and Meter Replacements
- Regulatory Permitting and Hazardous Materials Assistance
- SCADA Data and Communication Systems Improvements
- Treatment Plant Concrete Improvement Projects
- Treatment Plant Engineering Study – Permit Requirement
- UV Bioassay - UV Disinfection Reactor Test



Next Steps

- Collaborate with CEO of West County Health Centers to engage community stakeholders with water project survey results
- Collaborate with partners to assist with water filtration installation(s) and/or attain Household Water & Septic System Loan/Grant



Areas Seeking Input:

- How best to approach state policy change to allow for sewage spill penalty \$ to be used towards repairs and maintenance of Guerneville water infrastructure?
- How to contribute to the \$48.3 million funding needed to improve and maintain water infrastructure by Sonoma Water?

Keep the Conversation Going

David Thai, D.D.S.: dthai@wchealth.org



OraHealthSonoma



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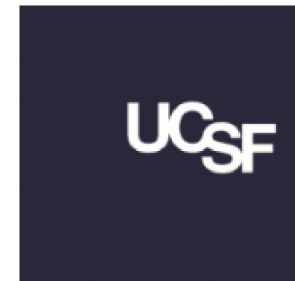


OralHealthSonoma

Thank you



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