



County of Santa Cruz

Water Advisory Commission

701 Ocean Street, Room 312, Santa Cruz, CA 95060
(831) 454-2022 TDD/TTY -Call 711 www.scceh.com
EnvironmentalHealth@santacruzcounty.us



AGENDA

SANTA CRUZ COUNTY WATER ADVISORY COMMISSION

Wednesday February 5, 2025, 4pm

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

In-Person: 701 Ocean Street; **Fifth Floor Redwood Room**

Remote via Teams: [Join the meeting now](#) Meeting ID: 262 771 450 584 Passcode: Yv63rU6D

Dial in by phone +1 831-454-2222 Phone conference ID: 223 238 214#

A. OPENING

1. Call to Order
2. Roll Call

B. PUBLIC COMMUNICATIONS

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

C. CONSENT AGENDA

Items on the consent agenda are considered to be routine in nature and will be acted upon in one motion. Specific items may be removed by members of the advisory body or public for separate consideration and discussion. Routine items that will be found on the consent agenda are meeting minutes, drought response updates, and Groundwater Sustainability Agency updates.

1. Approval of Meeting Minutes for December 4, 2024
2. Update from Groundwater Sustainability Agencies
3. Drought Response and DROP implementation update

D. COMMISSIONERS' REPORTS

Opportunity for Commissioners to provide brief updates

E. STAFF REPORTS AND ANNOUNCEMENTS

Opportunity for staff to provide brief updates

F. NEW BUSINESS

1. Meet Dr. Emily Donham, new Supervising Water Quality Specialist. Emily will discuss her background, as well the monitoring the Water Quality Team has done in response to the Moss Landing fire.

G. UNFINISHED BUSINESS and UPDATES

1. PFAS treatment project at Buena Vista Migrant Center
Presentation by Nathan Salazar on the project plan and public meeting held for the Buena Vista Migrant Center well, which has elevated PFAS.
Materials: Staff report
Presentation
2. Local Agency Management Plan implementation update
John Ricker will present an update on the County's progress implementing the 2022 Local Agency Management Plan for Onsite Wastewater Treatment Systems.
Materials: Staff report
3. Well Ordinance Update Process
Staff will present a brief update on the well ordinance update process.

H. CORRESPONDENCE

1. Email from Becky Steinbruner dated 12/4/2024
2. Email from Becky Steinbruner dated 12/11/2024
3. Email from Becky Steinbruner dated 12/29/2024
4. Email from Becky Steinbruner dated 1/28/2025

I. BOARD OF SUPERVISORS ACTION ON ITEMS AFFECTING WATER:

December 10, 2024

[DOC-2024-979 : Consider approving in concept an "Ordinance Amending Chapter 7.70 of the Santa Cruz County Code Relating to Wells and Borings" and an "Ordinance Amending Chapter 7.73 of the Santa Cruz County Code Relating to Individual Water Systems" to be consistent with State policy, approve California Environmental Quality Act \(CEQA\) exemption, and take related actions \(Health Services Agency\)](#)

J. ITEMS OF INTEREST

- Santa Cruz Sentinel, January 17, 2025:
<https://www.santacruzsentinel.com/2025/01/17/scotts-valley-santa-cruz-water-intertie-project-to-begin-this-month/>

- Executive Order regarding water in California issued January 25, 2025: [Emergency Measures to Provide Water Resources in California and Improve Disaster Response in Certain Areas – The White House](#)
- Toxic 'Forever Chemicals' Taint Rural California Drinking Water, Far From Known Sources <https://www.msn.com/en-us/health/medical/toxic-forever-chemicals-taint-rural-california-drinking-water-far-from-known-sources/ar-AA1vEU0r?ocid=sapphireappshare>
- Moonshot Missions Drinking Water System Needs Assessment and Alternative Analysis for the Big Basin Water Company: <https://www.bigbasinwater.com/s/MM-Needs-Assessment-and-Options-Report-BBWC.pdf>

K. AGENDA ITEMS FOR FUTURE MEETINGS

- Intercommission Working Group
- Small Water System consolidation forum

L. ADJOURNMENT



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Minutes

SANTA CRUZ COUNTY WATER ADVISORY COMMISSION

Wednesday December 4, 2024, 4pm

This meeting was held in hybrid format.

In-Person: 701 Ocean Street; **Fifth Floor Redwood Room**

Remote via Teams: [Join the meeting now](#) Meeting ID: 268 343 818 58 Passcode: i8iVEK

Dial in by phone +1 831-454-2222 Phone conference ID: 114 012 689#

A. **OPENING**

1. Call to Order
2. Roll Call

Commissioner	Attendance
Frank Cheap (1)	Absent
Ray Pereyra (2)	Present
Linda A. Wilson (3)	Present - remote
Brian Lockwood (4)	Absent w notification
Bryan Largay (5)	Present
Paul G. Lego, Chair – Rep. of Private or Mutual Water Companies)	Present
Nate Gillespie – Rep. of Public Water Purveyors	Present

Also in attendance: John Ricker, Sarah Easley Perez

B. **PUBLIC COMMUNICATIONS**

No Comments

C. CONSENT AGENDA

1. Approval of Meeting Minutes for October 2, 2024
2. Update from Groundwater Sustainability Agencies
3. Drought Response and DROP implementation update

Motion to approve consent agenda by Wilson, seconded by Gillespie, unanimous approval.

D. COMMISSIONERS' REPORTS

Opportunity for Commissioners to provide brief updates

Lego: water system working with moonshine missions, recommend them for other systems; they are doing a needs analysis, likely do a pricing review, review of ways to remove Nitrate and Hexavalent Chromium They will look at emergency intertie, maybe with Soquel Creek. Their work is at no cost to the system.

Pereyra: There are currently 11 sites with PFAS identified in the County.

E. STAFF REPORTS AND ANNOUNCEMENTS

Sierra: Presented on SB 552 implementation to the Western Groundwater Congress. There was a public meeting last night on the Big Basin Water Company status. Information was presented by the Receiver, Moonshot Missions, LAFCO, and RCAC. Rountree facility update – DPW is in the process of receiving and reviewing proposals from Civil Engineering Consultants to do the feasibility study (that will consider treatment and a potential consolidation with neighboring well) and then design the filtration system. Their goal is to have a consultant in contract by the end of January and get things rolling.

Largay: allocation of cost burden is a struggle for small water companies joining with others; how do you lay out on table the net benefit of cost to all parties? A template would be helpful.

Public comment (Steinbruner): Joe Serrano provided me with his slides from LAFCO symposium, presentation on Big Basin Water Co., (shared copies of slides);

Pereyra requested info that was presented at public hearing at Migrant Center, and for a presentation at the February WAC meeting.

F. NEW BUSINESS

None

G. UNFINISHED BUSINESS and UPDATES

1. Commissioner Agenda Item Guidelines

Ryan presented the guidelines, which provide parameters e.g., for informational items or items that don't require a lot of background information; action items, subcommittee needed, that info needs to be provided; if taken to Board of Supervisors for action, comprehensive info is necessary. This is for your information, no action requested. Will post Guidelines on WAC webpage.

2. Well Ordinance Update Process

Staff is looking for final approval from WAC on the documents being presented to the Board of Supervisors. There will be an opportunity to provide support at Board meeting; comments can be provided in person, by phone or in writing.

Last reviewed by WAC on August 7, 2024. Relatively minor changes since then. Staff presented to Assn of Realtors. Not yet presented to Farm Bureau though they have been contacted several times. Commissioner Lockwood has provided them with updates. They will not meet again until January. Environmental groups actively involved in stream depletion content. Since the last WAC review, they expressed concern about assuming less than 2 acre-feet for domestic wells and clarification around stream depletion thresholds.

Lego: who, if anyone, would have a problem with the new Ordinance vs the older version?

Ryan: we've engaged environmental groups, looked at law suits in other counties, we were concerned about Realtors and agriculture but have done substantial outreach to both communities.

Lego: seemed reasonable from standpoint of needing a replacement well for a mutual water company

Pereyra: Private well owner. Question about appropriation of water rights.

Ryan: not putting restrictions on how people use their water. For private wells will require a conservation questionnaire. This is consistent with a water right – verifying that not wasting water.

Pereyra: private well close to a gully. If sold and new owner wanted to develop there, a concern.

Ryan: nothing in Well Ordinance that restricts ability to develop a single family residence. Just setbacks from stream and seal depth requirements.

Gillespie: glad realtors didn't have concerns with point of sale requirements

Largay: effectively walks the line between avoiding overregulating and staff time and sufficiently protective; very protective process. Question about groundwater extraction concern area.

Limited yield area, - new wells may not meet yield criteria, which will be developed. Map can be changed. Karst areas - more restrictive; Seawater intrusion zones - may have additional analyses, more restrictive.

Adding/expanding a new use - more requirements would need to be implemented

Wilson: amazed at how much work you've done, very happy, so important;

Pereyra: what if not adopted?

Ryan: we'd make changes, probably come back again in February or later. Hopeful, on a timeline with Coastal Commission.

Public comment (Steinbruner): interested in more info about why we need to pass soon or will be in trouble. Question about appeals process. Area on map in pink needs to be explained. Concerned that existing well owners would not be able to get new/replacement well if near groundwater management action project. Concerned about power given to Health Officer. Curious how realtors felt about recording groundwater quality on deed. Concern about point of sale requirement involving neighbor, no discussion of water rights.

Ryan: Does need to be an appeals process but does not have to be in code, can be in policy which is easier to change. Will be part of permitting process. Have not finalized that policy yet. Exclusion zones in map are protective of GSA actions, Soquel Creek WD already has that established; Health Officer approval is standard; recording on deed is for newly developed wells only, no concerns raised to date; neighbors must agreeing to yield test monitoring if they think it is important; comfortable that doesn't challenge appropriate rights

Ricker: replacement well restrictions only refer to control zones

Supportive motion by Gillespie, second by Largay, all in favor

3. Annual Water Status Report for 2024

Ryan: background on Water Status Report

Pereyra: excellent to compare what happens during wet vs dry years, encourage to do every year, thank you for including BV Migrant Center;

Gillespie: page 3, graphs of wet year vs average rainfall year. Atmospheric rivers are amazing

Largay: Great compilation; reminded of crummy surface water quality, too bad don't have path outlined to resolution; document could call out need for planning and actions; maybe Measure Q could be helpful to that end. This document could serve as a plan that could be referenced for work proposed under Measure Q. Include next steps.

Discussion about Pinto Lake. Prop 4 as well.

Wilson: Antonelli Pond?

Largay: Algal blooms, floating plant, causes oxygen depletion but does not appear to produce toxin; artificial system, not a stable system;; nuisance water quality problems.

Lego: report is great, laundry list w highlights; maps e.g., figure 10 (page 89 of packet), cannot double click into source document. Link to map provided.

Public comment (Steinbruner): report is good; should highlight that water use is lowest since 1984, Mid-County Groundwater plan says monitoring wells are improving – highlight; City of Santa Cruz phenomenal capital improvement projects- high light; discussion of water optimization analysis needed; glad will add Migrant Center info; update from Soquel Water District meeting about water rates for biggest users

Motion by Pereyra, second by Largay: recommend Water Resources forward report to BOS

H. CORRESPONDENCE

None

I. BOARD OF SUPERVISORS ACTION ON ITEMS AFFECTING WATER:

None

J. ITEMS OF INTEREST

No Discussion

K. AGENDA ITEMS FOR FUTURE MEETINGS

- Intercommission Working Group

- Update on LAMP implementation
- Meet the new Supervising Water Quality Specialist
- PFAS information
- Workshop on support for small water systems
- Work plan check-in

L. ADJOURNMENT

Adjourned at 5:53pm



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Subject: February 5, 2025 Water Advisory Commission Consent Agenda

Title: Groundwater Sustainability Agency Updates

Background

There are three groundwater basins in the County subject to the Sustainable Groundwater Management Act. The following updates come from the Groundwater Sustainability Agencies tasked with managing and monitoring those basins.

Pajaro Valley Water Management Agency

- Funding
 - o Department of Conservation (DoC) Multibenefit Land Repurposing Grant, \$8.89 million: Staff and consultants have been meeting monthly with DoC staff and the Statewide Support Entity (SSE): staff are continuing to work with Regional Block Grant partners to finalize sub-grantee agreements; staff are in discussions with a consultant regarding the scope of work for Multibenefit Land Repurposing Plan support services; staff received payment for Invoice No. 2 in the amount of \$856,651.45 (these are “pass-through” funds that will be sent to Regional Block Grant Partner, the Land Trust of Santa Cruz County for its fee title acquisition of the “Beach Ranch” property).
 - o DWR Watershed Resilience Pilot Grant, \$2 million: Work on the watershed delineation and watershed network development continues; staff and the support team continue to meet with DWR staff and with representatives of the four other cohorts to discuss various aspects of the program; staff submitted Invoice No. 2 in the amount of \$2,622 on December 2, 2024.
- College Lake Integrated Resources Management Project
 - o Construction:
 - Water Treatment Plant & Intake Facility
 - Work continues on the Intake Facility and Water Treatment Plant, and on January 8th & 9th PG&E installed a new power pole at 76 Holohan Road to provide power to the Water Treatment Plant; commissioning meetings are ongoing.

- Supplemental Well No. 4 (SW4)
 - Work on SW4 is anticipated to resume on January 14 with the installation of the conductor casing at the new location; reverse rotary drilling is anticipated to begin on or about January 21.
 - Treated Water Pipeline
 - The contractor conducted the pressure test of the completed pipeline, it passed; the next step will be flushing the pipeline; staff and consultants are working to close emergency permits associated with work at the Salsipuedes Creek Crossing.
 - Due to a cultural resource discovery, Caltrans is requiring PV Water to excavate a portion of the roadway to search for additional artifacts; this work is not currently scheduled.
- Environmental: Biological, Cultural, and Native American resource monitoring is taking place as needed, and worker environmental training continues as needed.
- Adaptive Management Plan: Hydrologic monitoring, waterfowl monitoring, and steelhead surveys occurred this year and/or continue to occur. Waterfowl surveys were conducted on at least 24 separate days in 2024. Vegetation surveys were conducted in late October. Fisheries surveys were also completed. PV Water staff and YSI Inc. installed two water quality monitoring stations in December as part of the College Lake Project Water Quality Monitoring Plan. The stations are providing continuous water quality data while deployed.
- Outreach Activities: Staff continue to post information about the project online. Please check <https://www.pvwater.org/construction> regularly for construction related updates.
- Watsonville Slough System Managed Aquifer Recharge & Recovery Projects
 - Permitting: Staff received the final biological assessment report for the project and are continuing to review the addendum to the Environmental Impact Report.
 - Design: The consultant has completed the 100% Design Package.
 - Environmental: Permitting work and CA Red Legged Frog mitigation site design is underway.
 - Outreach: Communications are ongoing; staff and the support team issued offer letters to a majority of property owners in the last month and have been meeting with them in the time since.

Santa Cruz Mid-County Groundwater Agency

- The Agency Board met on December 12, 2024, at the Capitola Branch Library. At the meeting, the Board:
 - Approved the Agency Annual Financial Report for the Fiscal Year ended June 30, 2024.
 - Approved the Agency Periodic Evaluation of its Groundwater Sustainability Plan (GSP) and authorized submittal to the Department of Water Resources.
 - Authorized an amendment to the contract with Montgomery & Associates to improve the Agency groundwater model.
 - Received a presentation from SCI Consulting Group on long-term funding options for regulatory compliance under the Sustainable Groundwater Management Act and discussed the recommended approach for a fee study.
- The next regular meeting of the Agency is on March 20, 2025, at 6:00 pm.

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- The next regular meeting of the Agency is on March 20, 2025, at 6:00 pm.

Santa Margarita Groundwater Agency

- The Agency Board will meet on February 27, 2025, at 6:00 pm, at Scotts Valley Water District. At the meeting, the Board is expected to:
 - Receive updated appointments from member agencies and conduct election of officers.
 - Receive a presentation on the Water Year 2024 Groundwater Sustainability Plan Annual Report and authorize submittal to the Department of Water Resources.

- Receive a draft Agency budget for Fiscal Year 2026.

By: Sierra Ryan, Water Resources Program Manager with information from Rob Swartz and Brian Lockwood



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Subject: February 5, 2025, Water Advisory Commission Consent Agenda

Title: Drought Response & Outreach Plan (DROP) Update

Background

On September 23, 2021, Senate Bill (SB) 552 was signed into law. SB 552 requires that “a county shall establish a standing county drought and water shortage task force to facilitate drought and water shortage preparedness for state small water systems and domestic wells within the county’s jurisdiction”. The Water Advisory Commission voted to adopt the responsibility for implementing [SB 552](#) and receives regular updates on the progress of implementation.

Updates:

- There are currently 160 applicants for the Regional Waterboards free well testing program.
- Sampling restarted in mid-December with a total of 63 wells tested.
- Of those 63 wells tested, 15 exceed a drinking water standard for 1 or more of the following, E. coli, Nitrate, Arsenic, Hexavalent Chromium, and 1,2,3 TCP.
- Of the 15 wells with an exceedance, 2 wells had 1 or more households that enrolled in county services
 - 1 household received a point of use treatment system that successfully reduced Nitrate levels to below drinking water limits.
 - 4 households, which are all served by the same well, are receiving bottled water while additional sampling is scheduled to determine if POU treatment systems can be installed.
- Santa Cruz County staff will be presenting to the [Regional Water Quality Control Board](#) on the status of this program on February 21st, 2025.
- Sierra Ryan continues to represent interests of local government at the State [Drought Response Interagency Partnership \(DRIP\) Collaborative](#).

By: Sean Abbey
Water Quality Specialist III



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Subject: February 5, 2025, Water Advisory Commission Agenda

Title: Buena Vista Area PFAS Update: Small Water Systems

Background: Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that have been widely used in consumer products. PFAS are resistant to heat, water, and oil, and so are effective components of surface coatings for goods such as non-stick pans and waterproof clothing. These properties of PFAS also result in their accumulation in the environment and present challenges for removal, hence their nickname: “forever chemicals”.

Since 2019, some drinking water systems have been required to conduct PFAS sampling of their sources via monitoring orders issued by the State Water Resources Control Board. These orders have been directed primarily to water systems near likely sources of PFAS contamination such as landfills and waste transfer stations.

If PFAS are detected in sources above the state’s notification or response levels, water systems are required to provide notice in compliance with state requirements or remove the source from service.

Two small water systems, both adjacent to the Buena Vista Landfill, have had detections of PFAS in their sources: the Buena Vista Migrant Center and the Sheriff’s Rountree Facility.

Project Updates:

Buena Vista Migrant Center (BVMC):

The Stanislaus Regional Housing Authority, responsible for operating BVMC (including the water system), has applied for a permit for an ion exchange treatment system for PFAS removal. The water system also serves the adjacent Tierra Alta apartment complex for a total of 135 residential units. BVMC has one on-site well with no alternate water source.

The treatment system has been installed but is not yet approved for use; County Environmental Health is working with the State Division of Drinking Water to

determine monitoring requirements and specifics for how the system must be operated and maintained.

The treatment system consists of two (2) filtration units filled with single-use ion exchange resin in a lead-lag configuration to extend the service life of the filters and provide redundancy when maintenance is required. Spent resin will be hauled off-site by a certified contractor.

Rountree Facility:

The Rountree Medium Facility is operated by the Sheriff's Office, while operation of the water system is handled by the County Public Works Department. The water system serves a population of approximately 135 individuals, including inmates, corrections officers, and other personnel.

The County has secured an \$800,000 grant through the state's Integrated Regional Water Management program for the installation of a treatment system to remove PFAS and Chromium-6 and conduct a feasibility study reviewing potential backup sources of water. Like BVMC, Ion exchange is the treatment method proposed for this site.

Most of the grant funds, up to \$700,000, are allocated for treatment system installation. Up to \$100,000 is allocated for the feasibility study, which will evaluate secondary water source options including drilling a new well, investigating the suitability of other on-site wells as supplemental water sources, and installing an intertie connection with the BVMC well. The study will also assess if the consolidation of these two water systems is a beneficial alternative. Environmental Health has not received an update on this project since that provided at the December 2024 WAC meeting.

By: Nathan Salazar
Environmental Health Specialist III

Environmental Health Division



Buena Vista PFAS Background and Small Water System Project Updates

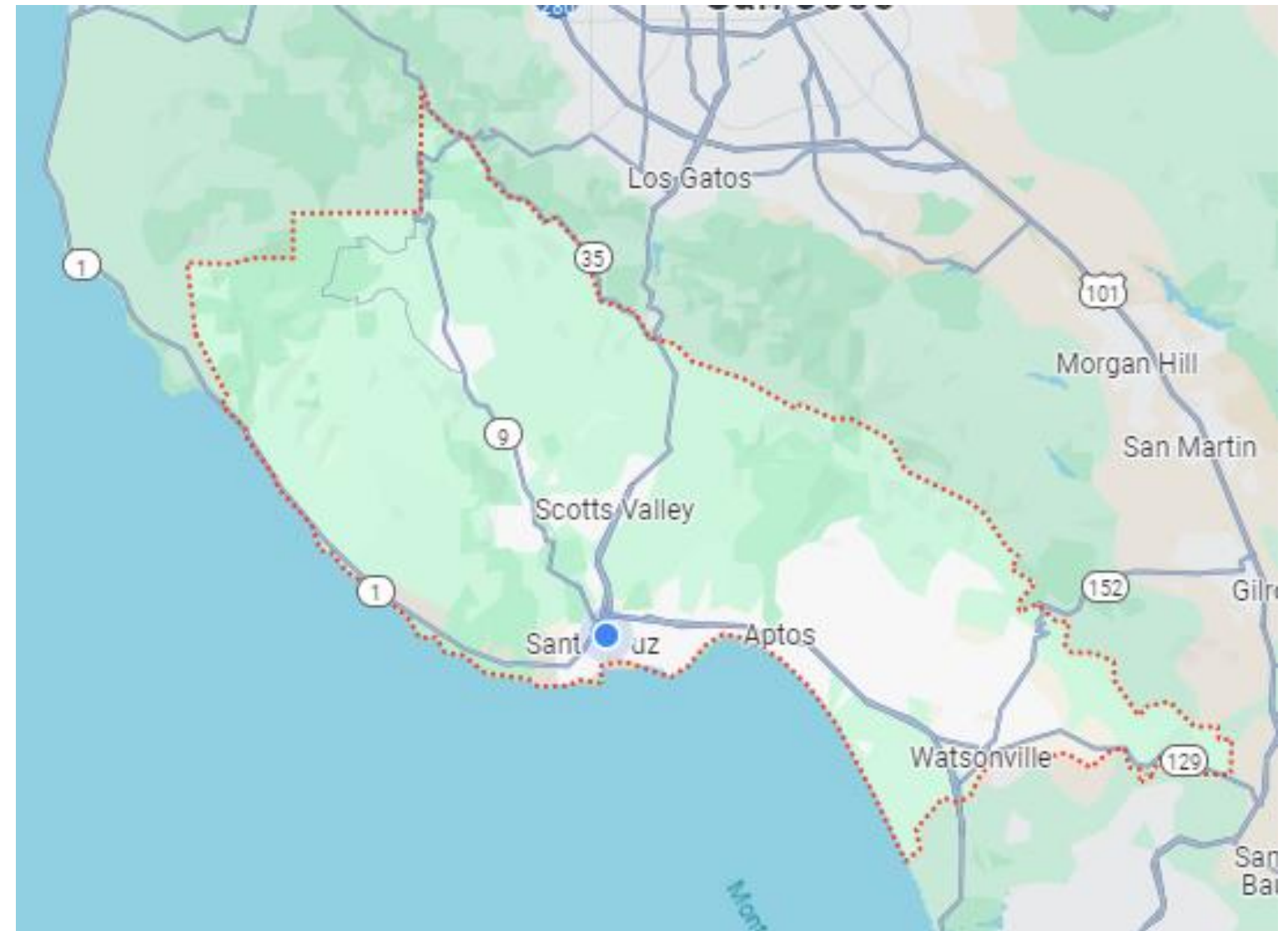
Water Advisory Commission Meeting

February 5, 2025

Nathan Salazar, D1, T2, REHS

Drinking Water in Santa Cruz County

- Five (5) large water suppliers:
 - Santa Cruz (City) Water Department
 - San Lorenzo Valley Water District
 - Scotts Valley Water District
 - Soquel Creek Water District
 - Watsonville (City) Water Department
- Rest of county is served by smaller water systems and household wells
- County Health Services Agency, Environmental Health Division oversees small water systems serving less than 200 connections/houses, including systems serving Buena Vista Migrant Center, Tierra Alta Apartments, and Rountree Medium Facility
- Water systems must receive a permit from the County and follow federal, state, and county requirements



Water Quality Testing

- Regulated water systems must take samples from their water sources (mostly wells) and from other locations throughout the system (such as faucets at homes/buildings and water tanks)
- Bacteria: tested once per month
 - Rotating location within system (outdoor faucet at selected housing units)
 - More samples required if bacteria present in monthly sample
 - Well sampled every three (3) months
- Chemical testing: dozens of chemicals are tested on a schedule based on the possible health effects of exposure over time

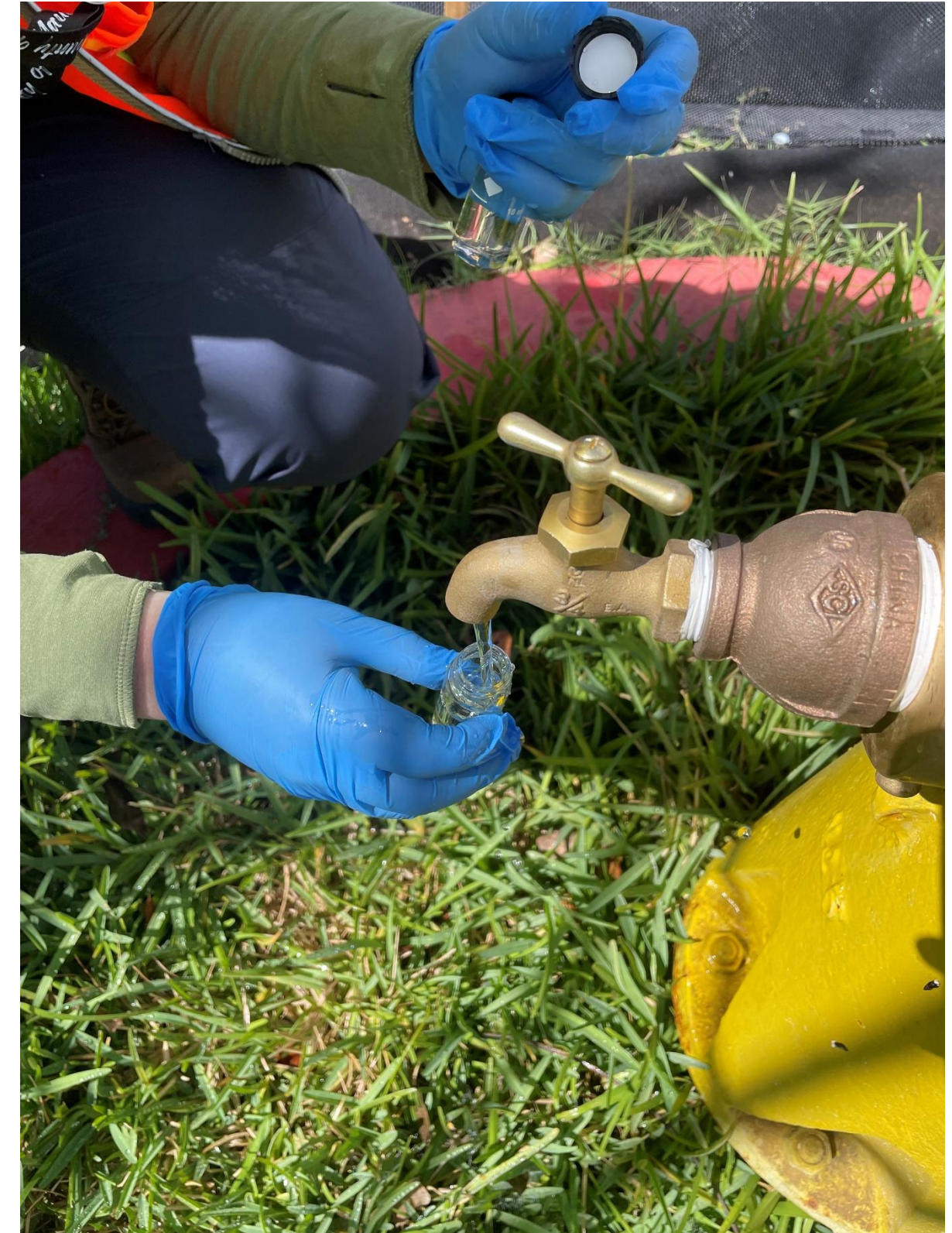


Photo: US Environmental Protection Agency

What are PFAS?

- Per- and poly-fluoroalkyl substances (PFAS)
- Group of chemicals found in consumer products such as nonstick pans and waterproof clothing
- Also known as “forever chemicals”, they take a long time to degrade and disappear from the environment
- Exposure to PFAS over long periods of time may increase the risk of cancer and other health effects such as increased cholesterol and, high blood pressure. Research into the effects of PFAS exposure is ongoing.



Image: Rubber News



Image: Teledyne Technologies

Where is PFAS contamination found?

- Landfills/garbage disposal sites
- Industrial facilities
- Wastewater treatment plants
- Fire department training sites
 - Airports
 - Military bases



Buena Vista Landfill

Photo: The Pajaronian

What is required?

- Nation-wide (US EPA)
 - Water systems must sample for PFAS starting in 2027
 - If PFAS are found, systems must treat water to remove PFAS or stop using contaminated sources by 2029
- California
 - Sent monitoring orders to selected water systems near possible contamination sources, including Buena Vista Migrant Center (BVMC)/Tierra Alta Apartments and Rountree Facility
 - These systems must take samples and notify residents if PFAS are found
 - PFAS treatment and removal is not yet required
 - Setting state limits is a slow process, PFAS limits may be set within the next few years



Photo: US EPA

Buena Vista Landfill Area



Buena Vista Migrant Center/Tierra Alta Apartments



Google Earth

BVMC/Tierra Alta Apartments Treatment System

- Stanislaus Regional Housing Authority, working with Natural Systems Utilities, has applied for an updated permit to operate a PFAS treatment system to remove these chemicals from the well water
- Environmental Health has inspected the new treatment system and is reviewing the permit application
 - Permit conditions to be determined
 - Regular sampling of treated water and well water will be required to confirm the treatment is working as intended and removing PFAS
 - Regular notices to BVMC and Tierra Alta residents about PFAS will be required until the treatment system is approved and shown to work properly

PFAS Removal System

Natural Systems Utilities

Bryce Ensminger, Hasani Mason

10/29/2024

PFAS Removal

How We Got to this Point



- The system has been sampling for PFAS quarterly since 2020.
- The system levels of PFOS above the notifications level and levels of PFOA above the action level.
- A cost analysis was done to determine the best treatment options for the system between (GAC) and (IX).
- NSU worked with industry leader Purolite to design system.
- NSU worked with regulator Nathan Salazar to obtain approval.
- The system was designed, ordered, and installed in 2024.

PFAS Removal System Design



THE SYSTEM CONSISTS OF:

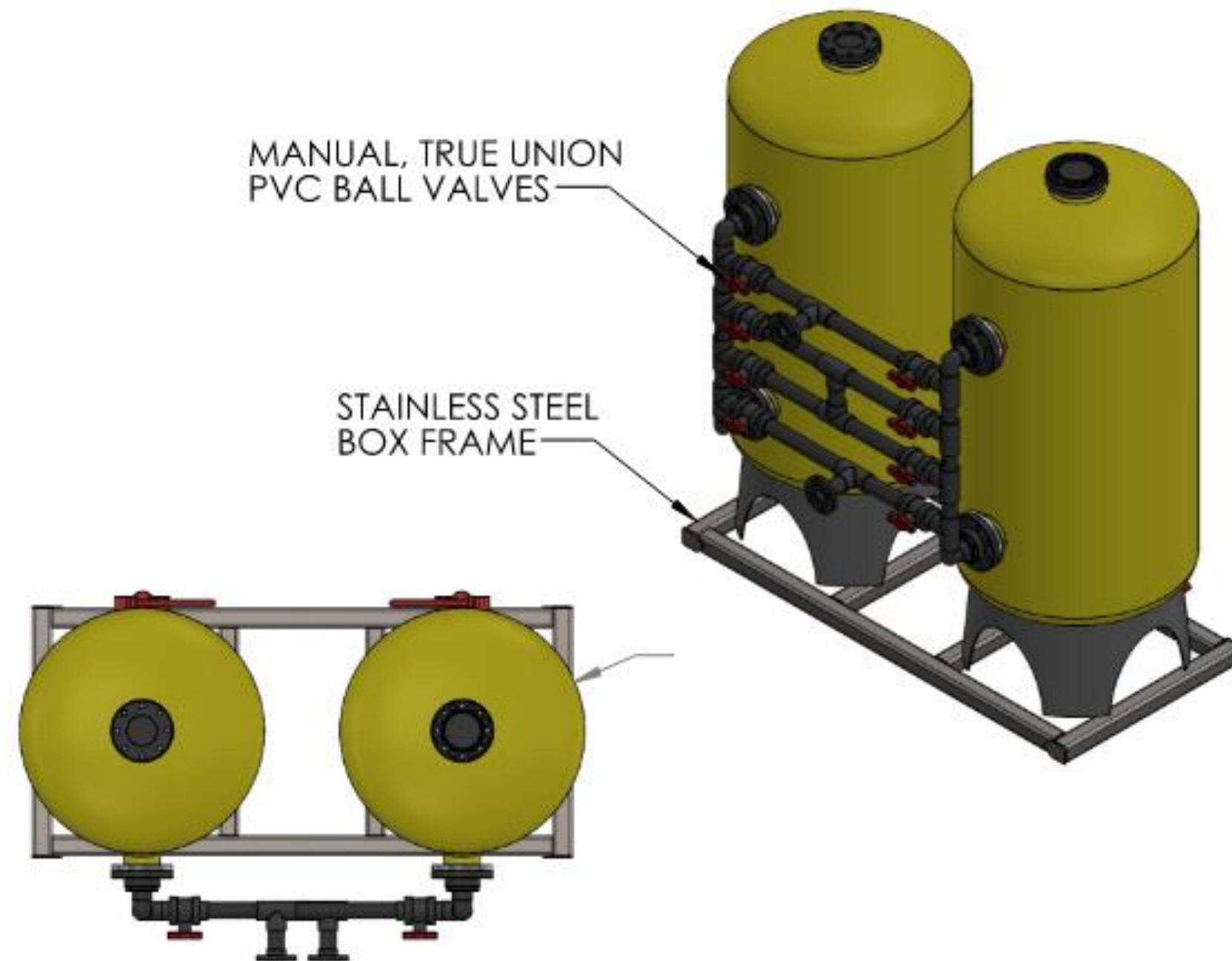
- (2) Primary 1 Micron Bag Filters
- (2) Ion-Exchange Resin Filters in series
- Chlorine Injection is still in place.

PFAS Removal Primary Filtration



- These Filters remove all particulate matter below 1 micron in size.
- This includes all media that could foul the PFAS filters
- Designed to treat 80 GPM
- Have over 6 months of replacement filters onsite to make sure they are always working
- Regularly serviced during routine operation

PFAS Removal Ion-Exchange Resin Filters



- These filters are made of made of NSF/ANSI 61 certified steel and filled with PFAS specific removal resin
- They are sized to handle 70 gpm each
- They are set up in a lead-lag formation where the treated water passes through both filters, the samples are taken after the first filter. This ensures there is always treated water going to the consumer
- The media is designed to last 3 years
- They are routinely sampled between filters, and the resin is replaced after breakthrough in the lead filter

PFAS Removal Ion-Exchange Resin



Typical PFAS
removal Resin



PFAS Particles
Being Removed

Purolite Purofine PFA694E

- Specifically designed to target PFAS particles over all other anions
- One time use resin, there is no backwash
- NSF/ANSI 61 Certified
- The resin has a low pressure drop across the filters
- The resin is routinely checked with sampling during normal operation
- The resin is designed to be replaced approximately every 3 years

Rountree Medium Facility



Image Landsat / Copernicus

Google Earth

Rountree Medium Facility

- Medium-Security Correctional Facility operated by Santa Cruz County Sheriff's Office
- Water system operated by County Public Works Department
- General Services Department (previous water system operator) secured an \$800,000 grant:
 - Treatment system installation for PFAS and Chromium-6 removal
 - Feasibility study to assess water source alternatives:
 - Suitability of existing on-site wells (primarily used for landfill dust control)
 - Drilling a new well
 - Establishing an intertie with BVMC/Tierra Alta Apartments well



Thank You!



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Subject: February 5, 2025 Water Advisory Commission Agenda

Title: Local Agency Management Plan Update

Background

The Water Advisory Commission last received an update on the Local Agency Management Plan (LAMP) from Environmental Health Director Andrew Strader on October 4, 2023.

Implementation Update

The Land Use Team has continued issuing permits, requiring Time of Sale septic tank pumping, and investigating complaints as outlined in the LAMP. Time of Sale inspections resulted in 15 approved OWTS upgrades in 2024, with another 12 pending.

The Land Use Team is fully staffed as of earlier this month. Of the six staff-level positions, three have now passed their REHS exams, the others are trainees. Trainees take around 2 years to complete their training, pass their REHS exam, and reach the experience level needed to be independent. Therefore, if there is no staff turnover, it will still be around two years before the team is functioning as designed.

The Land Use Team has recently been handed the additional fire re-build sites that had previously been handled by 4Leaf. The additional work may have a significant impact on staffing.

The Water Quality Team continues to monitor routine sampling locations in areas with high concentrations of septic systems to evaluate the potential impairment of surface water. The following constituents are evaluated at each site:

- WaterTemp, C
- pH
- Electrical Conductivity, microSiemens/cm
- Dissolved Oxygen, mg/L
- Turbidity, NTU

- CDOM (ppb PTSA)
- Optical Brighteners (ppb PTSA)
- UV Absorbance, 1/cm
- Total Coliforms, MPN/100 mL
- E_ Coli, MPN/100 mL
- Enterococcus, MPN/100 mL
- Nitrate as N, mg/L
- Phosphate as P, mg/L
- Total Dissolved Nitrogen, PPM N
- Total Dissolved Phosphorus PPM P

John Ricker is working with EH staff are finalizing the annual report, and beginning to evaluate the last 5 years of data to provide a 5-year assessment report to the Regional Water Quality Control Board.

EH has selected HS Gov Tech to update the current database. The new software will combine the time and complaint tracking software, Envision Connect, with the Land Use tracking database EH LUIS. It will be around 18 months before the new software is fully operational.

By: Sierra Ryan, Water Resources Program Manager with information from John Ricker and Heather Reynolds

From: [Becky Steinbruner](#)
To: [Sierra Ryan](#); [Paul Lego](#)
Cc: [Becky Steinbruner](#)
Subject: Public Comment on Water Advisory Commission Item Review of County Well Ordinance Update
Date: Wednesday, December 4, 2024 1:56:04 PM

*****CAUTION:**This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.***

Dear Santa Cruz County Water Advisory Commission,
I have reviewed the proposed County Well Ordinance Update information and have some concerns, stated below. I am concerned and protest the fact that neither the MidCounty Groundwater Agency nor the Santa Margarita Groundwater Agency received complete information regarding this proposed County Well Ordinance update and therefore, neither has the general public.

The MidCounty GSA did receive a presentation on September 19, 2024, <https://www.midcountygroundwater.org/sites/default/files/uploads/meetings/other/8.2.1%20Well%20Ordinance%20Update.pdf> it appears that effective October 25, 2024, major changes were made to the documents: https://scceh.com/Portals/6/Env_Health/water_resources/WellTAC/FinalWellDocs/CodeUpdates7_70%28strikeout-underline%29.pdf

https://scceh.com/Portals/6/Env_Health/water_resources/WellTAC/FinalWellDocs/Code%20Updates7_73%28strikeout-underline%29.pdf

While the Santa Margarita GSA meeting agenda of August 22, 2024 included the same slide presentation as was provided to the MidCounty GSA in October, <https://twistcms-shared.s3.us-west-2.amazonaws.com/meetings/113/agendas/3694.pdf> but the October 24, 2024 agenda does not include the County Well Ordinance updates: <https://twistcms-shared.s3.us-west-2.amazonaws.com/meetings/113/agendas/3900.pdf>

There has been no public event specifically highlighting the proposed changes to the County Well Ordinance, such as a LAFCO "Connect the Drops" Workshop held in evening hours with extensive public outreach and notification. This event is required by Santa Cruz County LAFCO Bylaws, but has not occurred since 2018.

1) There is no Appeal Process outlined or mentioned in updated Chapters 7.70 or 7.73. State law includes the right of the People to know how to address their grievances:

This question and answer document provides information on filing petitions. Any person who is aggrieved by an order or decision issued under Article 8 (commencing with Health and Safety Code section 116625) or Article 9 (commencing with Health and Safety Code section 116650), of the Safe Drinking Water Act (Chapter 4, Part 12, Division 104, of the Health and Safety Code) may file a petition with the State Water Board for reconsideration of the order or decision. In addition, any applicant for a permit to operate a public water system may petition to the State Water Board decisions and actions taken pursuant to Health and Safety Code section 116540.

The petition process applies to orders or decisions issued by the Deputy Director of the Division of Drinking Water, other officer or employee of the Division of Drinking Water, or by a Local Primacy Agency that has been delegated authority by the State Water Board pursuant to Health and Safety Code Section 116330. The petition process does not apply to orders or decisions adopted by the five member board at a board meeting. The petition process also does not apply to the imposition of enforcement costs, as they are not issued pursuant to Article 8 or 9 of the Safe Drinking Water Act.

Relevant statutory provisions concerning petitions can be found at Health and Safety Code Section 116701 et seq.

https://www.waterboards.ca.gov/drinking_water/programs/petitions/instructions.html

Please add a clear process for appeal.

2) There is no mention of impacts to adjudicated riparian well rights. This could adversely affect the private well owners with adjudicated riparian water rights, some of whom may be included in the map of "Groundwater Concern Areas". Please add clear language regarding wells in adjudicated riparian areas.

https://scceh.com/Portals/6/Env_Health/water_resources/WellTAC/FinalWellDocs/GroundwaterConcernAreasMap.pdf

3) Some of the new language in Chapter 7.73 INDIVIDUAL WATER WELLS is onerous, over-reaching and would be difficult to enforce.

For example:

7.73.030 Requirement for permit.

No parcel which is or shall be dependent in whole or in part upon an individual water system for its water supply shall be developed for human habitation until an individual water system permit is granted by the Health Officer. **No land use which is or shall be dependent in whole or in part upon an individual water system for its water supply shall be approved until an individual water system permit is granted by the**

Health Officer

This imposes land use restrictions on water use that are over-reaching by County's authority. For example, under the new regulation, it seems that if a land owner wanted to add a large garden area for food self-sufficiency, the owner would have to get a permit by the Health Officer to do so. I feel this is an over-reach of the County and should not be allowed as a requirement.

A second example:

7.73.050 Yield requirements includes this new language:

(C) For water systems serving new or expanded uses other than a residential dwelling unit, the applicant shall estimate the proposed water use and shall demonstrate that the water source can reliably and sustainably supply that amount of water and meet the requirements to protect resources as specified in SCCC 7.70.110. Such estimates and demonstration of water availability and compliance with SCCC 7.70.110 must be approved by the Health Officer. The Health Officer may develop policies for the demonstration of adequate non-residential supply.

(D) Limited Yield Areas. In areas where groundwater yield is known or expected to be limited, as determined by the Health Officer, more extensive yield testing will be required, which may include longer duration testing and monitoring of groundwater levels in the source well and nearby wells. Yield testing will also be required to demonstrate that yield requirements are met prior to approval of accessory dwelling units in Limited Yield areas. Limited Yield areas are those areas where underlying geologic conditions are limiting the storage and transmittal of groundwater, particularly where rock is impermeable, and water only occurs in fractures. No permit shall be issued unless and until the following water source requirements are established as prescribed in SCCC 7.73.060

A third example of this expansion of County authority is found in the new language of 7.73.050 regarding permits for existing wells:

G E) Existing Permit—Yield Retesting. The applicant for a building permit for a dwelling unit **or other expanded use** proposed for connection to a previously permitted individual water system shall submit a new certified yield test for any water source which is a component of that system in the event that two (2) years or more have elapsed since the last certified test of that water source or sources. The yield test must demonstrate that the source or combination of sources meet the present yield requirements for the existing and proposed connection to the individual water system. A bacteriological analysis shall be performed in accordance with the requirements of SCCC 7.73.070(A). A chemical analysis may be required by the Health Officer under the requirements of SCCC 7.73.070(B)

How does the County define "Other expanded use"?

4) What is the basis for the "Limited Yield Areas"? The map included on the County Environmental Well Ordinance Update https://scceh.com/Portals/6/Env_Health/water_resources/WellTAC/FinalWellDocs/GroundwaterConcernAreasMap.pdf
How would a property owner be able to conduct extensive yield testing involving nearby wells?

Have property owners in those areas been notified of this new restriction on their water supply?

5) There is no consideration of Appropriative Water Rights in the application of this new Well Ordinance Update. https://www.waterboards.ca.gov/waterrights/board_info/faqs.html

<https://www.eid.org/about-us/community-outreach/where-your-water-comes-from/water-rights-a-beginner-s-guide>

Existing well owners with senior appropriative water rights should have priority to obtain permits to construct new, supplemental or rehabilitative wells, but the new Well Ordinance language could prevent them from doing so.

6) Update language ignores adjudicated riparian rights in the Soquel Valley.

Chapter 7.73.050

(F D) Streams. Due to water quality concerns and limited availability of available flow during dry periods, streams shall not be permitted as a new source of domestic water supply.

https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/judgments/docs/soquelcreek_jd.pdf

Please omit the new language that removes and obstructs reasonable water use in any and all adjudicated and / or riparian areas, and keep the existing language:

" A stream source must have an adequate year-round flow during drought periods and must have a minimum flow of at

least five gallons per minute for each connection, measured during the months of August through October. The users must have a legal right to use water from the stream source on each property where the water will be used"

7) What is the basis for the areas coded as "Sea Water Intrusion Areas" in the map of Groundwater Concern Areas? https://scceh.com/Portals/6/Env_Health/water_resources/WellTAC/FinalWellDocs/GroundwaterConcernAreasMap.pdf
The boundaries of these areas are vague and there is no documentation to support them, and there is no language to guarantee that the boundaries would be re-evaluated in the future.

Please correct this problem and provide links to the documentation that supports and verifies the boundaries of the Sea Water Intrusion

8) "Groundwater Recharge Project Areas" are not defined, and no final tracer studies have yet been conducted by Soquel Creek Water District to clearly define the areas impacted by the PureWater Soquel Project injection of treated wastewater.

This new language will adversely affect existing private well owners and small water systems, such as Pine Tree Lane Water Mutual and Bluff Mutual as well as private domestic wells in the downstream groundwater gradient of the PureWater Soquel Project because those entities would no longer be allowed to construct supplemental or replacement wells. This could also potentially impact the three wells of Cabrillo College.

This seems to be a veiled attempt of planned consolidation under duress, and should not move forward without public notice and full environmental analysis.

At the very least, the County should not move forward with this new significant and potentially adverse restriction on private wells until the Final Water Optimization Analysis is complete and publicly released.

9) Without explanation for doing so, a great deal of authority regarding well permitting has now been delegated to the Public Health Officer.

For example:

7.73.070 Quality requirements.

No permit shall be issued until required reports of bacteriological analysis and chemical analysis performed by a laboratory **approved by the Health Officer** are submitted to the Health Officer, and the Health Officer determines that water produced by the system is fit for human consumption, according to standards established by the **California State Water Resources Control Board**. The Health Officer shall require that the water sample(s) be obtained by

the certified approved laboratory or an independent third party acceptable to the Health Officer.

(A) Bacteriological Analysis. Bacteriological analysis shall be performed by a laboratory **approved by the Health Officer**. The analysis shall be for total coliform organisms by the methods as prescribed by the latest edition of the Standard Methods for the Examination of Water and Wastewater, American Public Health Association

10) I support the addition of the individual rights to waive or deviate in water treatment in private wells (Chapter 7.73.070 (D)), but wonder how the point of sale would impact those recorded waivers on deeds. What would be the process for property owners if a new owner did not agree to sign a waiver and acceptance of exceedance?

Chapter 7.73.070 Quality Requirements

D) Deviation or Treatment.

Deviations exceeding any of the maximum contaminant levels for secondary (aesthetics) chemicals may be allowed, in the discretion of the Health Officer, if adequate chemical treatment is provided, or if the owners of each parcel served by the well sign a waiver stating that they do not object to the exceedance. Individual water systems which fail primary or secondary drinking water standards as set forth in Article 4, Chapter 15, Division 4 of Title 22 of the California Code of Regulations, as may be amended from time to time, may choose to treat the supply at the source. In lieu of a source treatment facility, an individual water system may choose to install a Point of Use (POU) or Point of Entry (POE) treatment device at each connection, subject to approval by the Health Officer.

(E) Notification Requirement.

A notice of nonstandard water quality shall be recorded by the Health Officer with the County Recorder's Office on the deed of any property served by a water source that does not meet water quality standards for drinking water according to standards established by the California State Water Resources Control Board. The Notice shall include:

(1) The date(s) the well was tested and the identity and amount of the constituent(s) found that did not meet standards,

(2) The type of treatment device(s) installed to reduce the constituent to a level that meets standards.

All proposed changes shown as of 11/25/2024

(3) Statement of the operating requirements to ensure proper performance of the treatment system such as: use of water conservation measures, disposal of byproducts, maintenance of a contract for servicing of the treatment system, and other maintenance requirements.

(4) Specification of any restriction on system use or property use, such as limitations on amount of water used, wastewater generated, or restrictions on building additions.

(5) Notification that County staff may conduct routine inspections of the system, as necessitated by the increased likelihood that the treatment system might fail.

11) What has been the reaction of the local Real Estate Community to the new Point of Sale requirements? How has this information been disseminated to the local Realtors?

7.73.075 Water source evaluation upon transfer of property.

(A) Evaluation Prior to Sale of Property. Prior to selling a property that is served by an individual water system, a property owner shall cause the water quality of the water source to be tested pursuant to the requirements of Section 7.73.070 and the yield of the source to be tested pursuant to the requirements of Section 7.73.060. The results of water quality testing and yield testing shall be provided to prospective buyers and the Environmental Health Division. Tests must have been completed within three (3) years prior to the date of transfer.

(B) Water Treatment Systems. If the property is served by a water treatment system or if a notice of nonstandard water quality has been recorded for the property, the seller is required to disclose any active annual service agreements, contact information of the current service provider, and the associated annual county and service provider fees.

(C) Enforcement. Failure to comply with any of the provisions of this section will be considered a violation of this chapter and subject the violator to any and all enforcement remedies provided by the SCCC

12) How will the addition of "Borings" in Chapter 7.70 be enforced, and how will it affect the sale of properties whose owners must conduct exploratory borings for groundwater level verification and septic systems?

7.70.105 Soil Borings.

The Health Officer shall establish policies and procedures for installation and destruction of soil borings so that such soil borings do not create a conduit or preferential path for movement of contaminants into groundwater.

Sincerely,
Becky Steinbruner

From: [Sierra Ryan](#)
Bcc: WAC Members
Subject: FW: Wondering About Results of Private Well Testing in Santa Cruz County?
Date: Wednesday, December 11, 2024 10:08:23 AM

Dear Commissioners, please see email below.

Sierra Ryan | Water Resources Program Manager
Water Resources Program | Environmental Health Division
Email: Sierra.Ryan@santacruzcountyca.gov
Phone: (831) 454-3133 | Cell: (831) 345-5202

From: Sierra Ryan
Sent: Wednesday, December 11, 2024 9:58 AM
To: Becky Steinbruner <ki6tkb@yahoo.com>; Paul Lego <pglego@gmail.com>
Cc: Ray Pereyra <mar@cruzio.com>; Jim Kerr <jkerr@midcountygroundwater.org>; Jon Kennedy <jkennedy@midcountygroundwater.org>; Curt Abramson <cabramson@midcountygroundwater.org>
Subject: RE: Wondering About Results of Private Well Testing in Santa Cruz County?

I will forward this to the Commissioners.

To answer your questions, no PFAS is not tested through this program, and we do not ask well owners to report to the County how they choose to respond to the information reported to them if they do not enroll in our assistance program. I do not know all of the sources of data that go into GAMA, so I don't know if it pulls from the water system reporting database.

Sierra Ryan | Water Resources Program Manager
Water Resources Program | Environmental Health Division
Email: Sierra.Ryan@santacruzcountyca.gov
Phone: (831) 454-3133 | Cell: (831) 345-5202

From: Becky Steinbruner <ki6tkb@yahoo.com>
Sent: Wednesday, December 11, 2024 9:26 AM
To: Sierra Ryan <Sierra.Ryan@santacruzcountyca.gov>; Paul Lego <pglego@gmail.com>
Cc: Ray Pereyra <mar@cruzio.com>; Jim Kerr <jkerr@midcountygroundwater.org>; Jon Kennedy <jkennedy@midcountygroundwater.org>; Curt Abramson <cabramson@midcountygroundwater.org>; Becky Steinbruner <ki6tkb@yahoo.com>
Subject: Wondering About Results of Private Well Testing in Santa Cruz County?

*****CAUTION:** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.***

Dear Santa Cruz County Water Advisory Commission,
I have read the staff report for the December 13, 2024 Central Coast Regional Water Quality Control Board meeting and note the Item 12 report about grant funded projects administered by the Rose Foundation. The report includes the free well testing program offered by Santa Cruz County Environmental Health Services Dept. and I also saw Sierra Ryan's letter included.
https://www.waterboards.ca.gov/centralcoast/board_info/agendas/2024/dec/item12_stfrpt.pdf

The report for Santa Cruz County includes the amount and methods of outreach conducted, and states;

As a result of their public engagement and outreach activities, the Well Testing Program quickly surpassed initial targets for enrollment within Santa Cruz County.

The footnote describes additional testing the County offered:
Santa Cruz County provides funding for the analysis of additional parameters, including bacteria (Total Coliforms and E. coli), iron, manganese, hardness, and unionized hydrogen sulfide to determine potential suitability for the installation of point of use (POU) drinking water treatment systems for income qualified households.

Was there any testing for PFAS in areas known to have this problem?

Tables #2 and #3 on page 9 provide a summary of the testing and general exceedances:
Santa Cruz 96 wells tested 23 had one or more exceedance found.

The number of wells found with 1,2,3-TCP, hexavalent chromium and nitrate total 24, so it is assumed that some wells had more than one exceedance. However, only two well owners are receiving actual assistance:

The County Well Assistance Program has installed a POU treatment system at one household and has delivered approximately 60 gallons of replacement drinking water to two other households while they assess the feasibility of POU treatment. Upon installation of the POU treatment systems, these households will stop receiving bottled water delivery. For more information about Santa Cruz County's Household Well Assistance, please contact the Santa Cruz County Environmental Health Department: Sean Abbey at (831) 698-6166 or via email at sean.abbey@santacruzcountycalifornia.gov

What are the other well owners doing to address their water quality problems now identified?

The GAMA Tracker shows 234 wells in the County with 1,2,3-TCP, five of which show exceedance levels. These seem to be in South County areas.
Are the wells at Renaissance High School, the KOA Campground and Rountree Detention Center included in those?

I request that the County Water Advisory Commission place this on the next agenda for discussion with a visual review of the GAMA results and update of remedial actions being taken.

Thank you for your good work.
Sincerely,
Becky Steinbruner

From: [Becky Steinbruner](#)
To: [Ray Pereyra](#); [Sierra Ryan](#)
Cc: [Paul Lego](#); [Becky Steinbruner](#)
Subject: Excellent Article re: PFAS and Sewage Sludge Contamination on Farms
Date: Sunday, December 29, 2024 9:25:04 AM

******CAUTION:**This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hi, Sierra and Ray,
I hope you are both enjoying the festive season and the lovely rain.

The Mercury News had a great article about the need for PFAS clean up on dairy farms in Texas that had applied sewage sludge. (December 26, 2024, page C1 "Farmers seek 'forever chemicals' cleanup help'). I thought of your good work, Ray, and wanted to send you the link. I could not find it but found this excellent piece of investigative journalism that I think you will find of interest, if you are not already aware of it:

<https://www.newsnationnow.com/prime/pfas-forever-chemicals-sludge-farmers/>

Please share it with the other Water Advisory Commissioners. I think it merits a question about where the City of Santa Cruz and City of Watsonville waste treatment sludge is taken, and how it is used.

I wonder if any local farmers use sewage sludge-based fertilizers?

Thank you for your good work.
Happy New Year,
Becky

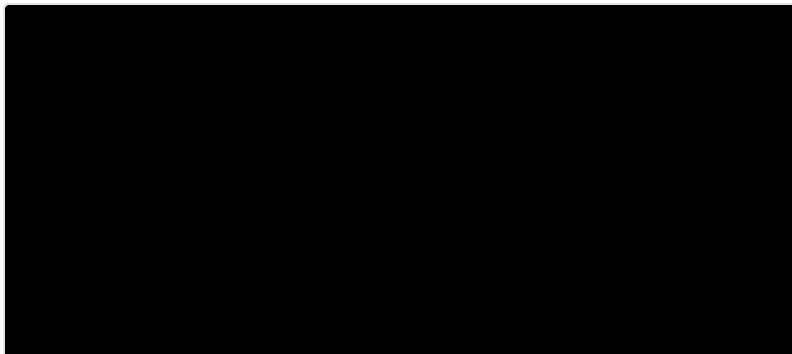
From: [Becky Steinbruner](#)
To: [Sierra Ryan](#); [Ray Pereyra](#)
Cc: [Becky Steinbruner](#)
Subject: Study Finds Bacteria Effective in Digesting PFAS in Contaminated Soils
Date: Tuesday, January 28, 2025 8:14:11 AM

******CAUTION:**This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hi, Sierra and Ray,

My husband found a report that shows a bacteria is effective in digesting PFAS in contaminated soils in Portugal. Within 100 days, the bacteria separated the chemical bonds and even degraded the metabolites.

[Rare Aerobic Bacterium Found to Break Down 'Forever Chemicals' | Sci.News](#)



Rare Aerobic Bacterium Found to Break Down 'Forever Chemicals' | Sci.News

News Staff

Labrys portucalensis F11, a strain of aerobic bacterium from the Xanthobacteraceae family, can break down and tr...

"Many previous studies have only reported the degradation of PFAS, but not the formation of metabolites," said Mindula Wijayahena, a Ph.D. student at the University at Buffalo and SUNY.

"We not only accounted for PFAS byproducts but found some of them continued to be further degraded by the bacteria."

The bond between carbon and fluorine atoms in PFAS is very strong, so most microbes cannot use it as an energy source," said Professor Diana Aga, a researcher at the University at Buffalo and SUNY.

"The Labrys portucalensis F11 bacterial strain developed the ability to chop away the fluorine and eat the carbon."

Labrys portucalensis F11 was isolated from the soil of a contaminated industrial site in Portugal and had previously demonstrated the ability to strip fluorine from pharmaceutical contaminants. However, it had never been tested on PFAS.

Please share this information with the County Water Advisory Commissioners and others appropriate.

Thank you.
Sincerely,
Becky