



CITIZENS WATER ACADEMY

Water Quality

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Laboratory & Environmental Compliance Manager

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Dublin San Ramon
Services District

Water, wastewater, recycled water

Water Quality: Agenda

- » **Where does your drinking water come from?**
- » **Sampling and testing**
- » **Water quality topics of interest**
- » **Contaminants of emerging concern**
- » **How to stay engaged?**



ZONE 7 WATER SUPPLY



Zone 7's water supply includes approximately 60-80% treated surface water and 20-40% groundwater each year. The amount of each type of source water varies depending on the season's precipitation, location and other conditions.

Drinking Water: Distribution Sampling



- » 39 sampling locations
- » Sites are visited daily or weekly
- » Trained sample collections staff



Drinking Water: Testing

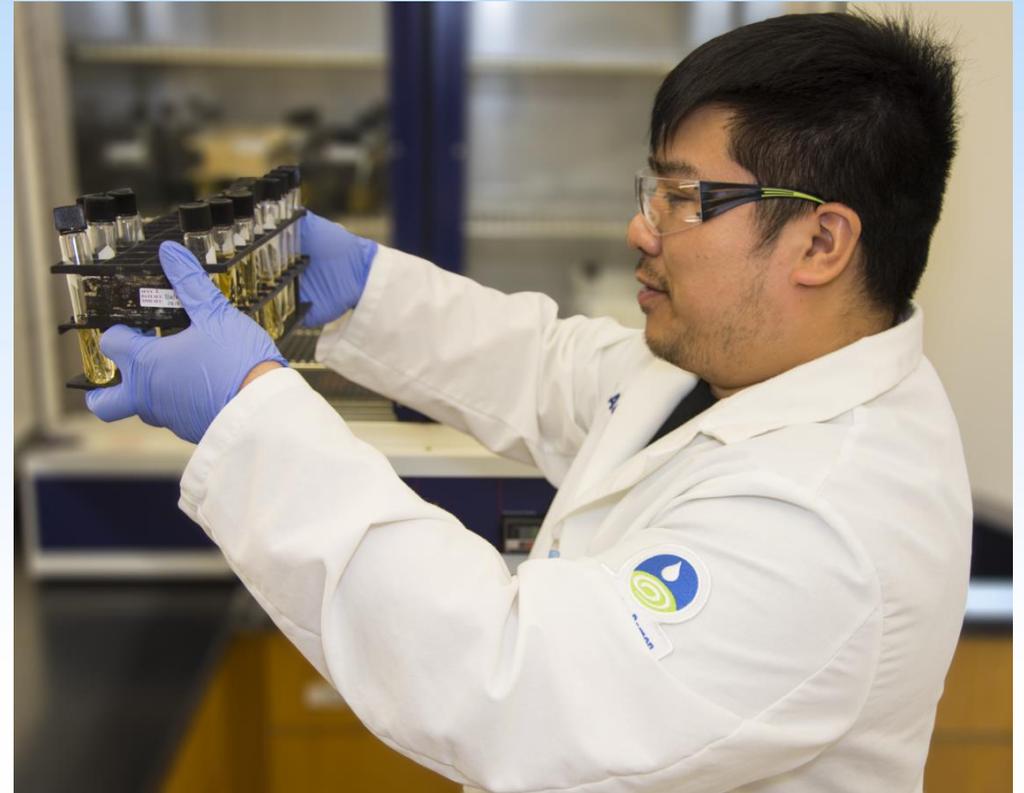


- **>42,000 analytes tested annually**
- **178 different chemical or microbiological analytes**
- **Drinking water meets or exceeds State and Federal Standards**



Drinking Water: Laboratory

- » Accredited by the California Environmental Laboratory Accreditation Program
- » 3 Chemists and 3 Laboratory Technicians
- » Provides on call emergency coverage



Water Quality Topics of Interest

- » **Common terms and unit of measurement**
- » **Lead and Copper**
- » **Hardness**
- » **Total Dissolved Solids**



Common Terms

» Primary Standards– health effects

- Maximum Contaminant Limit (MCL)
- Action Limit (AL)

» Secondary Standards- aesthetic effects

- Secondary Maximum Contaminant Limit (sMCL)

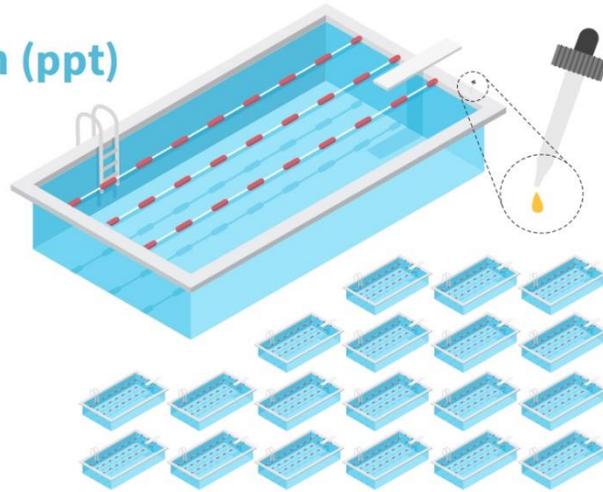


Unit Measurement

1 part per trillion (ppt)

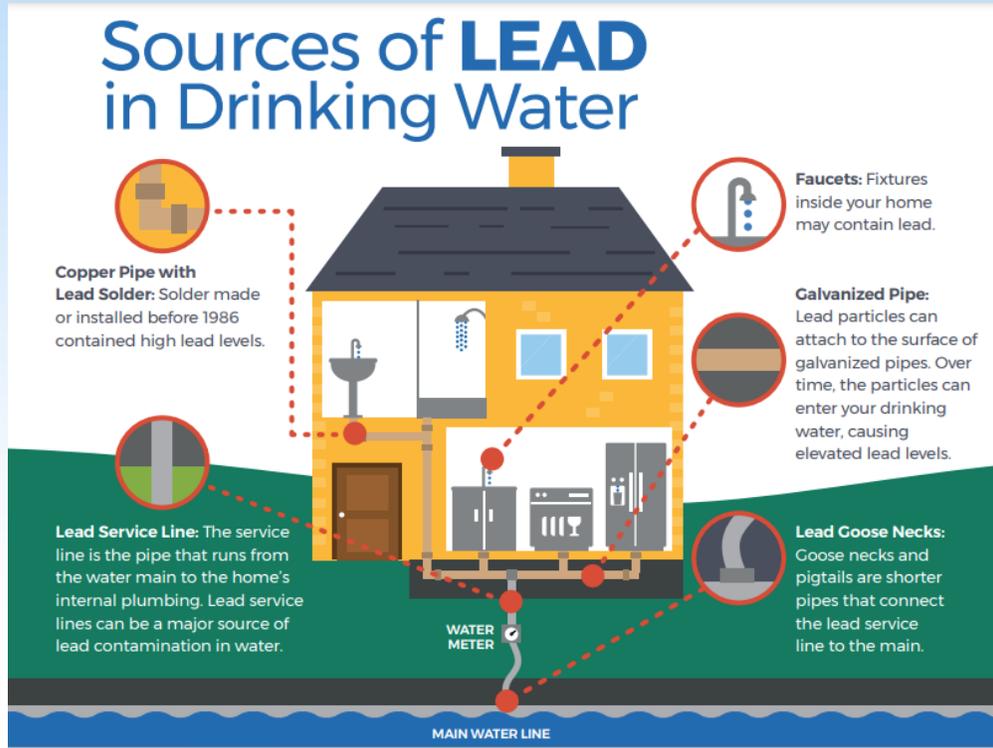
IS EQUIVALENT TO A
SINGLE DROP OF
WATER IN

**20 olympic-sized
swimming pools**



- » **1 mg/L (one part per million): 1 cup of water in a swimming pool**
- » **1 $\mu\text{g/L}$ (one part per billion): 1 drop of water in a swimming pool**
- » **1 ng/L (one part per trillion): 1 drop of water in 20 Olympic sized swimming pools**

Lead and Copper



Source: https://www.epa.gov/sites/default/files/2017-08/documents/epa_lead_in_drinking_water_final_8.21.17.pdf

- » Triennial Sampling (June-Sep)
- » Last sampled: 2022
- » Next sampling event: 2025
- » All samples were below the regulatory limit



Hardness

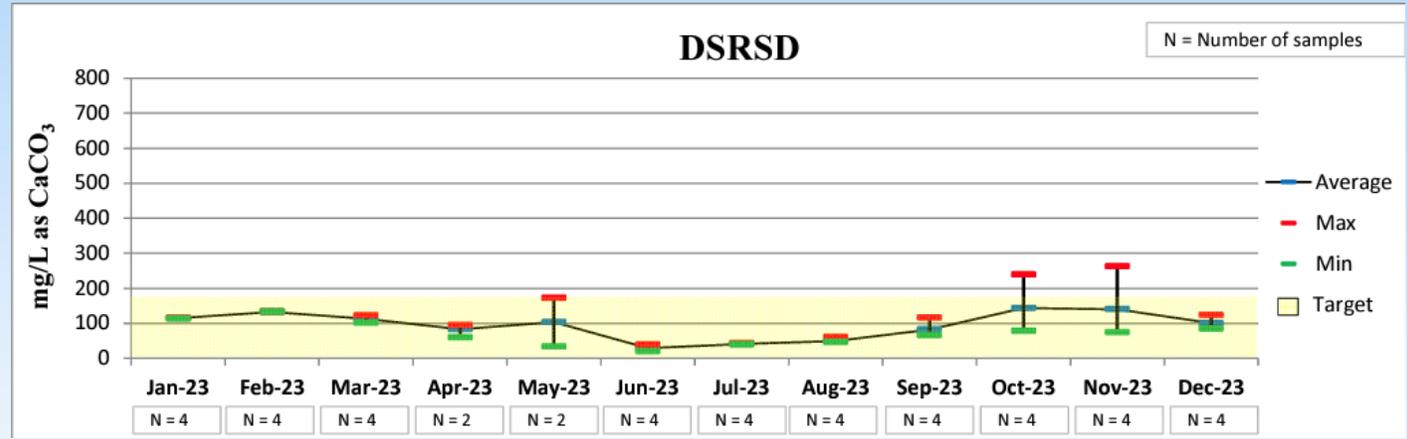
- » No health related limit or aesthetic limit
- » Cause: Natural occurring minerals in the source water

Hardness Classification	Calcium Carbonate Concentration (mg/L)
Soft	0-60
Moderately Hard	61-120
Hard	121-180
Very Hard	>180

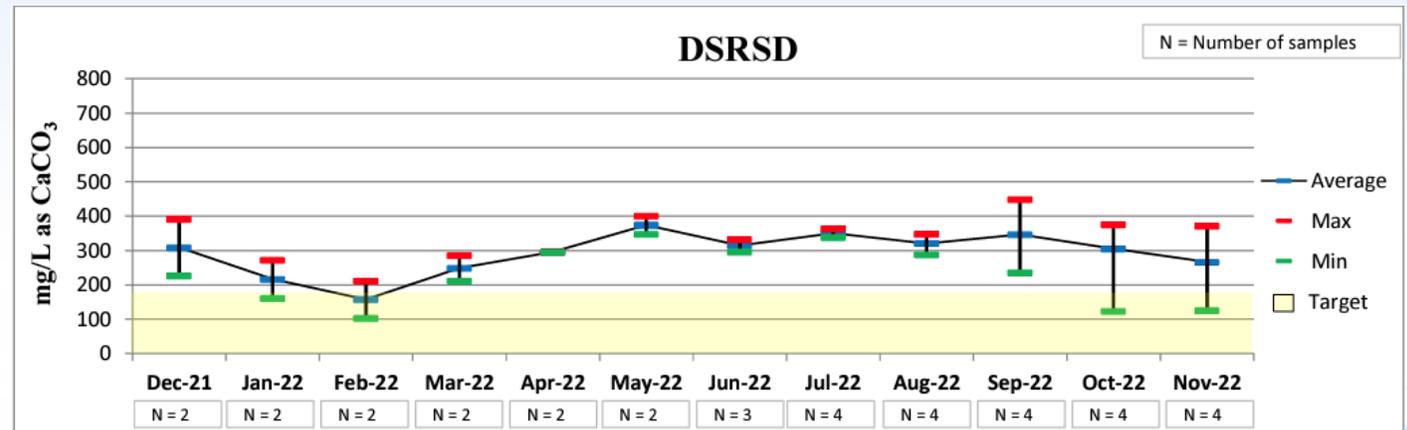


Hardness

» 2023 Wet Year



» 2022 Dry Year



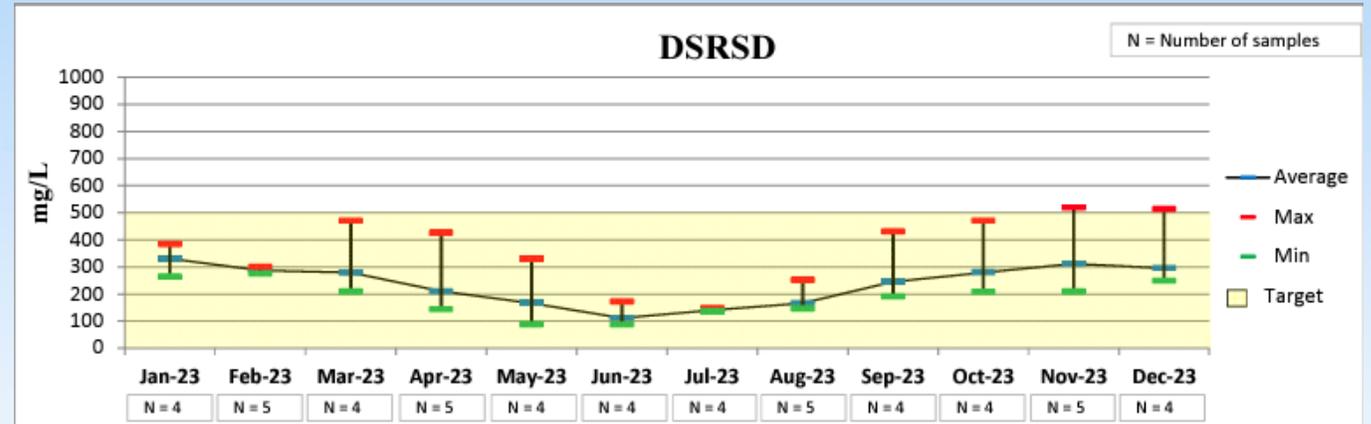
Total Dissolved Solids (TDS)

- » Cause: Natural occurring minerals in the source water
- » No health related limit
- » Secondary limit for TDS: 1000 mg/L
 - Consumer acceptance limit
 - Target: 500 mg/L- may notice taste, odor, scaling, hardness
 - Upper Limit: 1000mg/L
 - Short Term: 1,500 mg/L

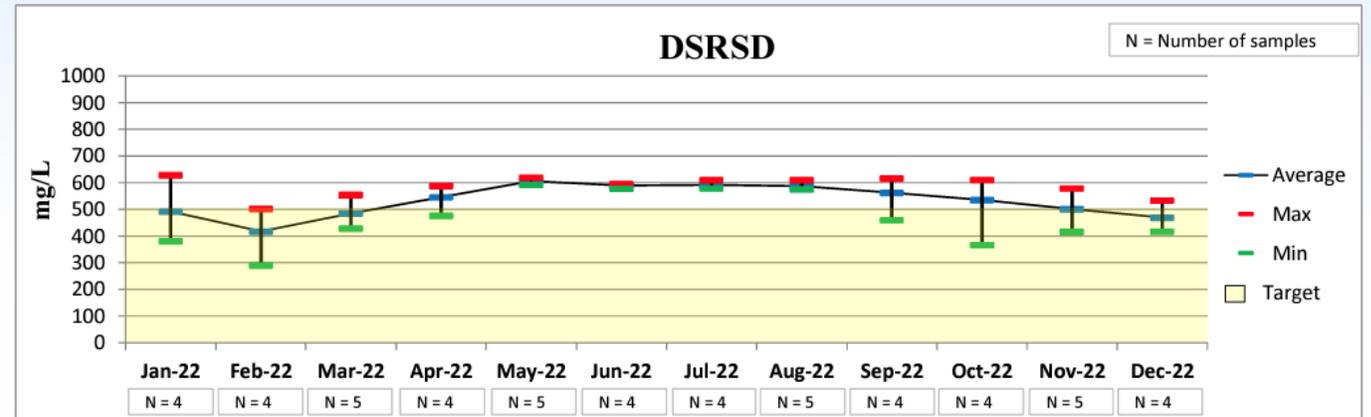


Total Dissolved Solids

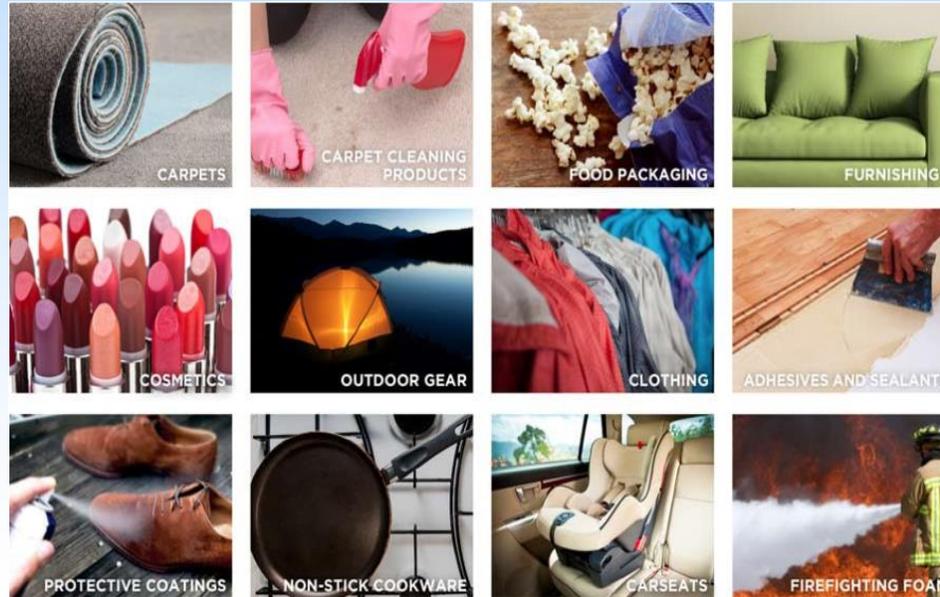
» 2023 Wet Year



» 2022 Dry Year



Contaminants of Emerging Concern: Per and Polyfluoroalkyl Substances

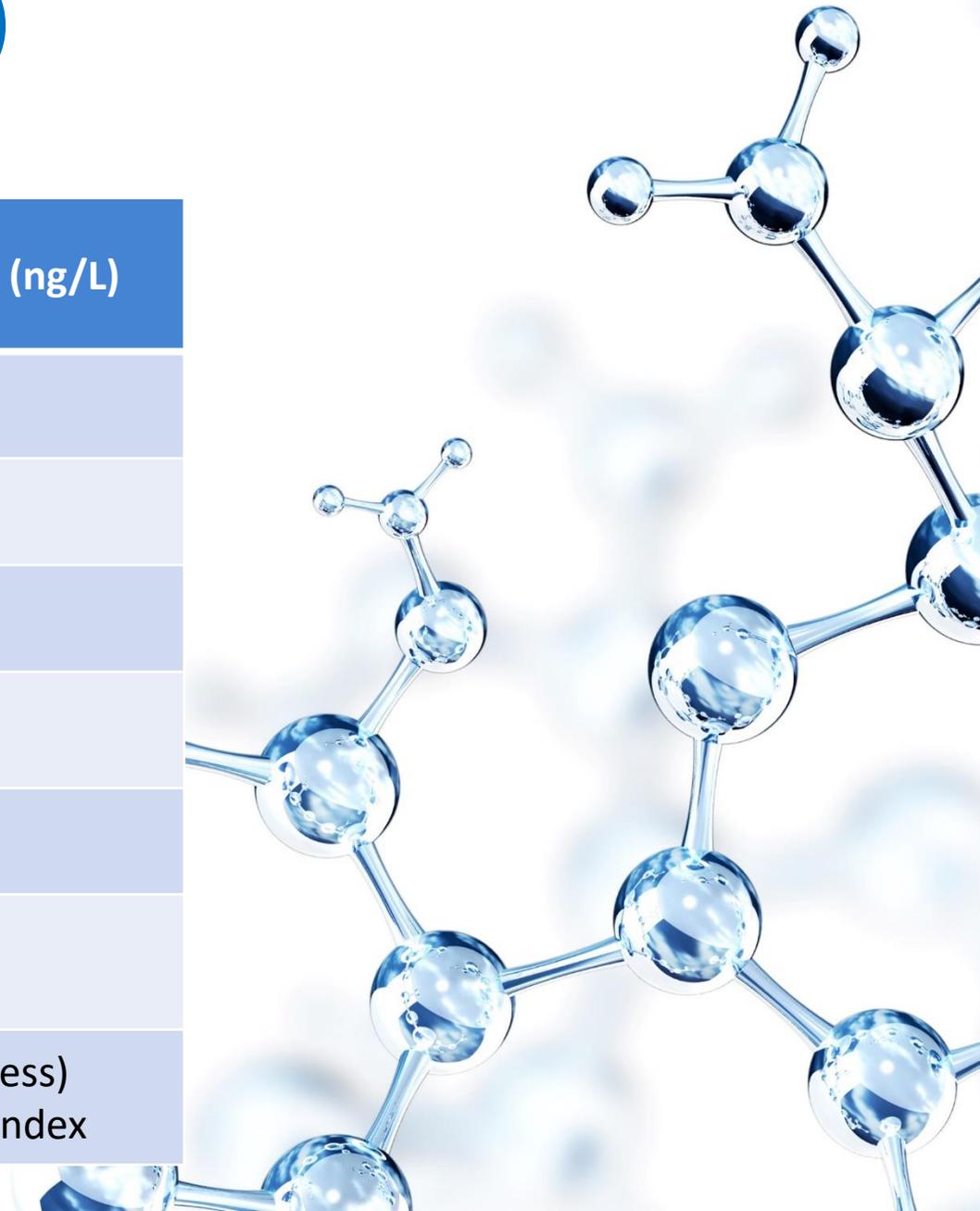


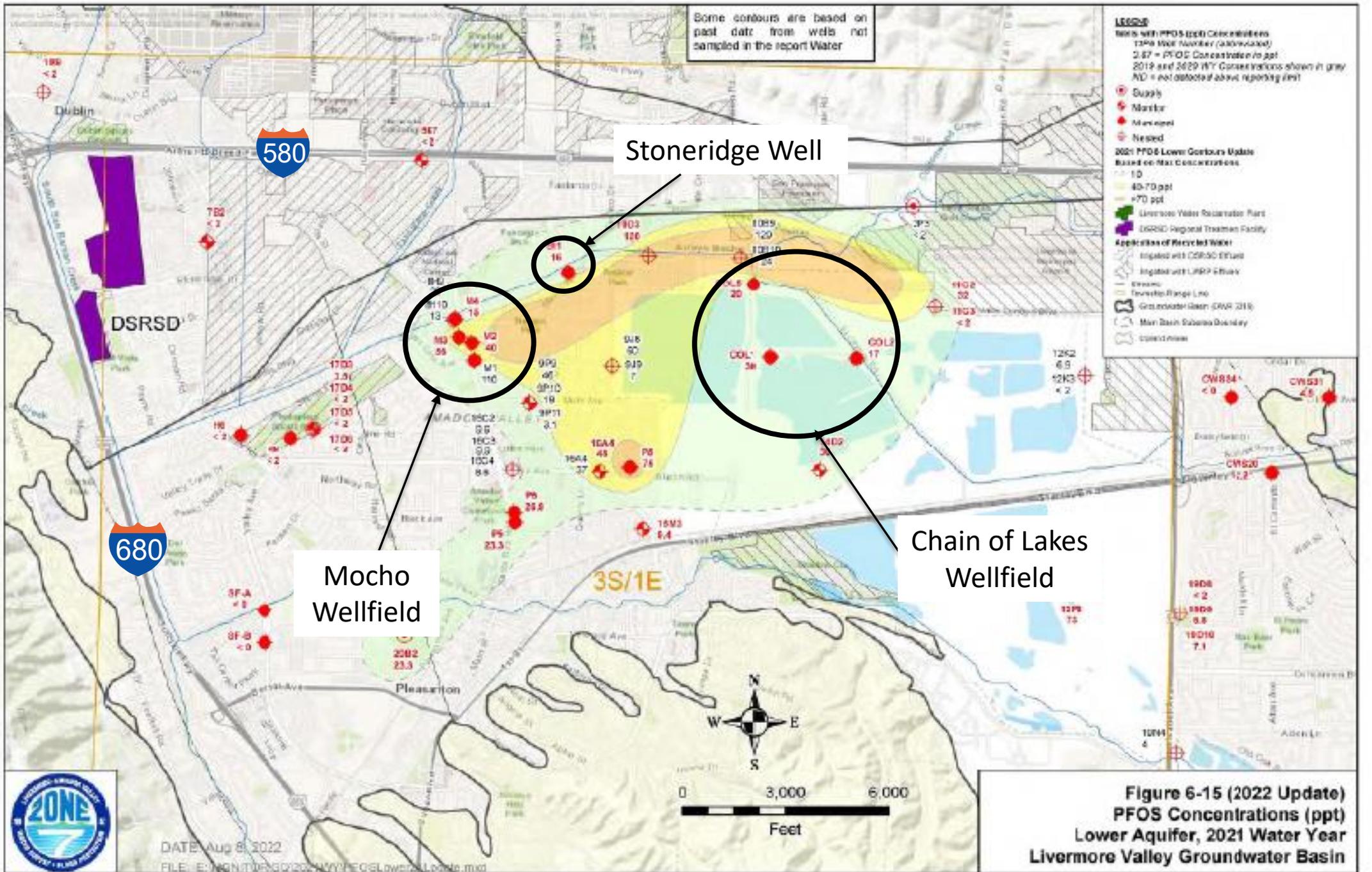
Green Sciences Policy Institute



PFAS: Final Federal Limits (MCL)

PFAS	Final MCL (ng/L)
Perfluorooctanoic acid (PFOA)	4.0
Perfluorooctanesulfonic acid (PFOS)	4.0
Perfluorononanoic acid (PFNA)	10
Perfluorohexanesulfonic acid (PFHxS)	10
Perfluorobutanesulfonic acid (PFBS)	10
Hexafluoropropylene oxide dimer acid (HFPO-DA -Gen X Chemicals)	10
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA and PFBS	1 (unitless) Hazard Index





PFAS: Zone 7 Water Agency Water Treatment



Stoneridge Well Ion Exchange Vessels.

Source: <https://www.zone7water.com/news-release/zone-7-upgrades-stoneridge-well-ion-exchange-pfas-treatment-facility>

» Mocho Site

- Well 4 (untreated side stream)
- Demineralization plant (Reverse Osmosis Treatment)

» Stoneridge

- Ion Exchange (Completed)
- \$16 million

» Chain of Lakes- under construction

- Ion Exchange (Summer 2024)



PFAS: UCMR 5- Planning for Future Regulations

10 years makes a difference!

UCMR 3 (2013-2015)	UCMR 5 (2023-2025)
6 PFAS Compounds	29 PFAS Compounds
Minimum reporting levels: 10-90 ng/L	Minimum Reporting Levels: 2-20 ng/L

- » **What?**
 - Lithium and 29 PFAS
- » **Where?**
 - Sampling a location where Zone 7 Water Agency's supply and DSRSD's distribution system connects
- » **DSRSD Results: No detections**



Contaminant of Emerging Concern: Microplastics

A person wearing a yellow hoodie and blue jeans is shown from the waist down, holding a handful of colorful microplastic debris in their gloved hands. The background is a blurred outdoor setting with a large white bag of trash.

- » State of California driven
- » Health impacts: animal studies indicate potentially adverse effects, including the reproductive system
- » Statewide study: late 2024

Drinking Water: How to Stay Informed

- » Annual Water Quality Report
- » Triennial Public Health Goal Report and Presentation



Dublin San Ramon Services District
Water, wastewater, recycled water

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.
Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有關你的食水報告，內有重要資料和訊息。請找他人為你翻譯及解釋清楚。

2022 ANNUAL WATER QUALITY REPORT

A MESSAGE FROM THE GENERAL MANAGER

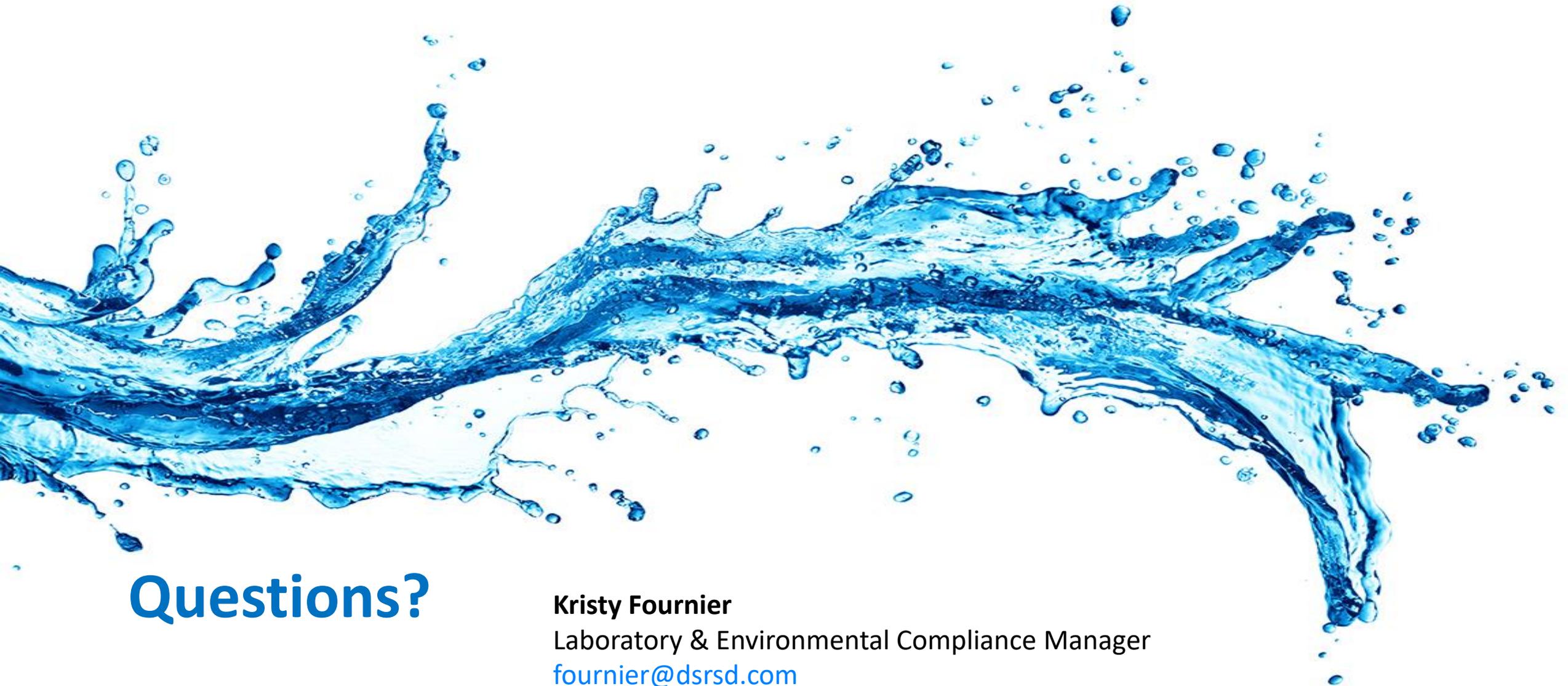
The Dublin San Ramon Services District is pleased to present the calendar year 2022 Annual Water Quality Report to provide our customers with important information about their drinking water. The District purchases all of its potable water from Tri-Valley wholesaler Zone 7 Water Agency. DSRSD's trained staff work to deliver reliable, high-quality water service and are on-call 24/7/365. The results of the water quality monitoring performed by Zone 7 and DSRSD confirm water delivered to customers met—and in most cases exceeded—all state and federal standards in 2022. This is the essence of what water agencies do.

Conservation as a way of life
After three years of severe drought, the District is optimistic following a rainy season that alleviated dry conditions. As this drought eases, we look to our customers to practice water conservation as a way of life in California. DSRSD customers are eligible to apply for water-saving rebates through Zone 7 at www.dsrsd.com/rebates.

Ensuring a reliable water supply
The District continues to partner with Zone 7 on a diverse regional water portfolio to ensure water supply reliability. Collaborating with other Tri-Valley water retailers, DSRSD is working to address collective water needs now and for the future. Learn more about the Tri-Valley's water supply challenges and solutions at www.trivalleywater.org.

Dan McIntyre
Dan McIntyre
General Manager

Pictured here, the Lake Oroville main spillway flows with water on March 10, 2022. The California Department of Water Resources uses the spillway to manage Lake levels, especially in anticipation of rain and snowmelt.



Questions?

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