THE WORDROUS WORLD WATER

2021 ANNUAL CONSUMER CONFIDENCE REPORT



Zone 7 provides high-quality water to four major water retailers, along with a small number of direct customers, serving over a quarter-million people in the Tri-Valley including Pleasanton, Livermore, Dublin and the Dougherty Valley area of San Ramon.

Working collaboratively with our retail partners, we are able to make a world of difference in ensuring our water supply is safe, clean and sustainable.



All Zone 7 water supplied in 2021 met the regulatory standards set by the state and federal governments and, in almost all cases, the quality was significantly better than required.

WHERE IN THE WORLD DOES THE TRI-VALLEY'S WATER COME FROM?

Source water assessment

Zone 7 Water Agency draws from a diverse portfolio of drinking water sources, including local and imported surface water as well as groundwater from wells. We carefully monitor all these sources to ensure their continued quality and to protect the safety of our water supply.

A source water assessment is conducted on each groundwater well as required by the California State Water Resources Control Board (State Water Board). Sanitary surveys for surface water supplies are conducted every five years. The latest sanitary survey for the California Delta and the State Water Project (SWP) is scheduled for completion by summer 2022.

Protecting our source water is an important part of providing safe drinking water to the public that meets the stringent Zone 7 water quality goals. By monitoring for potential contaminants, we can proactively address threats to water quality. For example, groundwater sources can be vulnerable to releases from chemical/petroleum pipelines, leaking tanks, groundwater contamination plumes, septic tanks, and wastewater-collection systems. Surface water can become contaminated as it travels through the Sacramento and San Joaquin watersheds and the Delta. After leaving the Delta, water is transported to Zone 7 via the South Bay Aqueduct (SBA). The SBA water quality can become polluted from local cattle grazing, wildfires, wildlife activities, and recreational activities in the watersheds of the Bethany and Del Valle reservoirs. In order to deliver the high-quality water we expect in Zone 7, we proactively participate in a number of activities to improve water supply reliability and the water quality of the SBA.

Copies of any public outreach materials, source water assessment reports or sanitary surveys are available by calling Gurpal Deol at: 925-447-0533.

GROUNDWATER





IMPORTED SURFACE WATER

The majority of our water supply originates as Sierra Nevada snowmelt and is conveyed by the State Water Project through the Delta and then via the South Bay Aqueduct.*



LOCAL SURFACE WATER

This is comprised of local rain runoff stored in Lake Del Valle.



GROUNDWATER

This supply, carefully managed by Zone 7, is pumped from the aquifer that underlies the Livermore-Amador Valley; water in the aquifer comes from local rainfall and from strategic recharges made with imported water to ensure access during dry years.

* In wet years, we store surplus SWP supplies in local and offsite groundwater basins for use when needed, and for reliability during droughts.



Saving water in a historic drought

California is currently facing the most severe drought since 2012-2016. In 2021, Zone 7 had to pump more groundwater than in previous years due to reduced surface water supplies. While Zone 7 strategically plans for dry years, storing excess reserves in wet years in our local groundwater basin and in Kern County storage, we cannot make it through drought periods without the help of our community.

Mandatory 15 percent conservation has been in effect since September 2021 and residents are asked to continue to use water wisely.

What can you do about the drought?

Outdoor irrigation makes up a whopping 60% of household water use. Cutting back on your irrigation is the most impactful way to help the community save water for next year.

Visit zone7water.com/conserve for more resources and tips.

WHAT'S IN YOUR WATER?



Water Quality Testing

As part of rigorous quality control, Zone 7 Water Agency regularly checks for a range of substances in our water supplies to ensure we can deliver safe and clean water to customers. The results table shows the average level and range of each detected regulated contaminant in our water supplies. Detected secondary standards and additional parameters are also listed. The following components may be of interest to our customers:

TURBIDITY is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system for surface water treatment.

TOTAL ORGANIC CARBON (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the maximum contaminant levels (MCL) may lead to adverse health effects, including liver or kidney problems, nervous-system effects, and increased cancer risk. TOC removal requirements are applicable to surface water treatment plants only.

NITRATE in drinking water at levels above 10 mg/L (as nitrogen) is a health risk for infants less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels in Zone 7's surface water supplies are typically very low (less than 1 mg/L) as compared to groundwater, but both sources meet all standards.

How to Read the Table

	STATE	STAND	ARDS	ZONE 7 RESULTS		
CONTAMINANT	MCL	DLR (MRL)	PHG (MCLG) [MRDLG]	Average	Range	
1 Selenium µg/L	<mark>2</mark> 50	<mark>3</mark> 5	<mark>4</mark> 30	5 ND	6 ND	

Terms to Know

MAXIMUM CONTAMINANT LEVEL (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals or Maximum Contaminant Level Goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

PUBLIC HEALTH GOAL (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

PRIMARY DRINKING WATER STANDARD (PDWS): MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements, and water-treatment requirements.

TREATMENT TECHNIQUE (TT): A required process intended to reduce the level of a contaminant in drinking water.

REGULATORY ACTION LEVEL (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

RUNNING ANNUAL AVERAGE (RAA): Test results based on an average of the previous four quarters.

RANGE: Range of detected results from Not Detected (ND) to the highest test result based on all samples collected during the year.

- The contaminant being tested in our labs.
- 2 The highest level of a contaminant allowed for drinking water. Our results must be lower than this amount.
- 3 The level at which we must report our results, even though they are lower than the standard.
- Goal levels at which the state or federal government would like to keep our results below.
- 5 Average results.
- 6 Range of results.

2021 WATER QUALITY TESTING RESULTS

			1	er Board							
CONTAMINANT	MCL	DLR (MRL)	PHG (MCLG) [MRDLG]					Major Sources in Drinking Water			
Total Coliform Bacteria	5.0% of monthly samples are positive		(0)	Highest Percentage	of Mont	thly Positive Samples		Naturally present in the environment			
Total Trihalomethanes (TTHMs), µg/L	80	1*	NA	Highest Locational Running Annual Av	erage		les Collected in 2019	Byproduct of drinking water disinfection			
Haloacetic Acids (five) (HAA5), µg/L	60	1*	NA	56			- 72 - 22				
Chloramines as Chlorine, mg/L	Maximum Residual Disinfectant Level (MRDL) = 4.0		[4]			Range of Monthly Average Chloramines 2.4 - 2.7		Drinking water disinfectant added for treatment			
Water Supply Sources											
CONTAMINANT				SURFACE WATER		GROUND	WATER				
Turbidity	TT = 1 NTU maximum TT = 95% of samples ≤ 0.3 NTU		NA NA	Highest Level Found= 0.2 NT % of samples ≤ 0.3 NTU=10	30			Soil runoff			
Total Organic Carbon	TT= Quarterly RAA Removal Ratio ≥ 1.0		NA	Lowest Quarterly RAA Ratio =	1.3	Average Range 181 ND - 369 NA NA ND ND - 12 ND ND - 0.1 2.9 1.1 - 4.8		Various natural and manmade sources			
Inorganic Chemicals Barium, µg/L Bromate, µg/L Chromium total, µg/L Selenium, µg/L Fluoride, mg/L Nitrate as Nitrogen, mg/L	1000 Quarterly RAA = 10 50 50 2 10	100 5 10 5 0.1 0.4	2000 0.1 (100) 30 1 10	Average Range ND ND Highest Quarterly RAA = 8 ND - 18 ND ND ND ND ND ND ND ND ND ND ND ND-0.2 ND ND-0.9				Erosion of natural deposits; discharge of drilling wastes; and discharge from metal refineri Byproduct of drinking water disinfection Erosion of natural deposits; discharge from steel and pulp mills and chrome plating Erosion of natural deposits; discharge from mines and industrial wastes. Erosion of natural deposits and discharge from fertilizer and aluminum factories Erosion of natural deposits; runoff from fertilizer use; and leaching from septic tanks and s			
Radionuclides Gloss Alpha Particle Activity (pCi/L)** Uranium (pCi/L)	15 20	3 1	(0) 0.43	3 3 ND ND		3 1.2	ND - 6 ND - 4.1	Erosion of natural deposits Erosion of natural deposits			
Secondary Drinking Wate	r Standards, established	by DD	w								
Conductivity (µS/cm) Chloride (mg/L) Iron (µg/L) Sulfate (mg/L) Total Dissolved Solids (mg/L) Turbidity (NTU)	1600 500 300 500 1000 5	(100) 0.5 (0.05)		710 569 - 849 130 87 - 177 ND ND 53 23 - 92 396 323 - 475 ND ND - 0.1		941 97 ND 62 569 ND	653 - 1244 47 - 152 ND - 373 34 - 92 395 - 782 ND	Substances that form ions when in water, seawater influence Runoff/leaching from natural deposits; seawater influence Leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from natural deposits Soil runoff			
Additional Parameters - included to assist consumers in making health or economic decisions, i.e. low-sodium diet, water softening, etc.											
Alkalinity as calcium carbonate (mg/L) Boron (µg/L) Total Hardness as calcium carbonate (mg/L) Potassium (mg/L) Sodium (mg/L)		100	- - -	101 77 - 126 240 160 - 500 127 96 - 168 3.9 3.3 - 4.6 97 77 - 113		298 652 356 2.0 65	228 - 372 280 - 1230 278 - 452 1.6 - 3.0 30 - 115	Naturally-occuring minerals Naturally-occuring mineral Naturally-occuring minerals Naturally-occuring mineral Naturally-occuring mineral			
pH (Units) Silica (mg/L)	-		-	8.5 8.2 - 8.9 10 5 - 14		7.5 26	7.3 - 7.6 24 - 28	Naturally-occuring minerals Naturally-occuring mineral			

NOTES:

* THMs each component DLR is 1 µg/L. HAAs each component DLR is 1 µg/L except Monochloroacetic acid that has DLR of 2 µg/L. ** PHG for Chloroform is 0.4 µg/L. PHG for Bromoform is 0.5 µg/L. PHG for Bromodichloromethane is 0.06 µg/L. PHG for Dibromochloromethane is 0.1 µg/L. *** Gross alpha data is from 2017. **

Abbreviations/Units: MCL = Maximum Contaminant Level, DLR = Detection Limit for Purposes of Reporting (State Water Board established), MRL = Minimum Reporting Level, NA = Not Applicable, PHG = Public Health Goal, MCLG = Maximum Contaminant Level Goal, MRDLG = Maximum Residual Disinfectant Level Goal, RAA = Running Annual Average, TT = Treatment Technique, NTU = Nephelometric Turbidity Unit, $\mu g/L$ = Micrograms per liter, mg/L = Milligrams per liter, MS/cm = Microsiemens per centimeter, pCi/L = Picocuries per liter, ND = Monitored for but not detected at or above DLR or MRL. ND or value in range column indicates that more than one analysis was performed during the year.

Where Do Contaminants Come From?

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and it can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

MICROBIAL CONTAMINANTS, such as viruses and bacteria that may come from wastewater-treatment plants, septic systems, agricultural-livestock operations, landscaping, agriculture and wildlife.

INORGANIC CONTAMINANTS, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

So, how much is THAT? Let's compare:



PESTICIDES AND HERBICIDES, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

ORGANIC CHEMICAL CONTAMINANTS, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.

RADIOACTIVE CONTAMINANTS which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

CONTAMINANTS NOT DETECTED IN ZONE 7'S WATER SUPPLY

	Organic Ch	emicals		Inorganic Chemicals	Radionuclides***	
VOLATILE ORGANIC CHEMICALS (VOCs) Benzene Styrene Carbon Tetrachloride 1,1,2,2-Etrachloroethane 1,2-Dichlorobenzene 1,1,2,2-Etrachloroethylene 1,4-Dichloroethane 1,2,2-Tichloroethylene 1,2-Dichloroethylene 1,1-Tirchloroethane 1,1-Dichloroethylene 1,1,2-Tirchloroethane 1,2-Dichloroethylene 1,1,2-Tirchloroethane 1,2-Dichloroethylene 1,1,2-Tirchloroethane 1,2-Dichloroethylene 1,1,2-Tirchloroethane 1,2-Dichloroethylene 1,1,2-Tirchloroethane 1,2-Dichloroethylene 1,2-Tirchloroethane 1,3-Dichloroethylene 1,2-Tirchloroethane 1,3-Dichloroene Yenes		SYNTHETIC ORGANIC Alachlor Atrazine Bentazon Benzo(a)pyrene Carbofuran Chlordane 2,4-D Dalapon Dibromochloropropane (DBCP) Di(2-ethylhexyl)adipate Di(2-ethylhexyl)phthalate Dinoseb Diguat	CHEMICALS (SOCs)* Heptachlor Epoxide Hexachlorobenzene Hexachlorocyclopentadiene Lindane Methoxychlor Molinate Oxamyl Pentachlorophenol Picloram Polychlorinated Biphenyls Simazine Thiobencarb	Arsenic Antimony Asbestos Beryllium Cadmium Cyanide Mercury Nickel Nitrite (as nitrogen) Perchlorate Thallium Zinc	Radium-226, Radium-228 Beta/photon emitters Tritium, Strontium-90	
Mełhyl-tert-butyl ether (MTBE) Monochlorobenzene		Endothall Endrin Ethylene Dibromide (EDB) Glyphosate	Toxaphene 2,3,7,8-TCDD (Dioxin) 1,2,3-Trichloropropane (TCP) 2,4,5-TP (Silvex)			

SECONDARY STANDARDS: CONTAMINANTS NOT DETECTED IN ZONE 7 WATER SUPPLY									
Aluminum Color Copper Foaming Agents (MBAS) Manganese	Methyl-tert-butylether (MTBE) Odor-Threshold Silver Thiobencarb								

NOTES: None of the secondary standards listed above were detected at or above DLR in Zone 7 water supply during 2021 monitoring.

Lead and Copper Rule and Corrosion Control

Zone 7 Water Agency and its retailers have been in compliance with the Lead and Copper Rule requirements for many years and we continue actively monitoring for lead and copper in our delivered water. In addition, Zone 7 completed a corrosion control treatment evaluation study in September 2017 to ensure existing processes are optimized for corrosion control.

The following monitoring data is for Zone 7's direct customers only. Per State Water Board approval, compliance monitoring is conducted once every three years. Data from June 17, 2021 monitoring is summarized below:

CONTAMINANT	NUMBER OF SAMPLES COLLECTED	90TH PERCENTILE NUMBER OF SITES LEVEL DETECTED EXCEEDING AL		ACTION LEVEL (AL)	PHG	
Lead (µg/L)	12	7	None	15	0.2	
Cooper (µg/L)	12	63	None	1300	300	

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Zone 7 Water Agency is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.



Learn more

Dive into the Wondrous World of Water to learn more about the water treatment process.



WHAT ARE PFAS?

What are PFAS

(Per- and Polyfluoroalkyl Substances)?

PFAS are contaminants of emerging concern that are widely used in manufacturing multiple products present in our daily lives. People can be exposed to them through food, packaging, air pollution, dust and drinking water. The health impacts of PFAS are not yet fully understood, but the U.S. Environmental Protection Agency (EPA) states, "There is evidence that exposure to PFAS can lead to adverse health outcomes in humans."

PFAS Regulatory Update

EPA currently has lifetime health advisory levels for four PFAS and is developing a proposed National Drinking Water Regulation for two most common PFAS (PFOA and PFOS); EPA anticipates finalizing the rule by the end of 2023. EPA is also evaluating additional PFAS and considering regulatory actions to address groups of PFAS. The California State Water Resources Control Board has issued drinking water advisory levels for three PFAS so far and is pursuing advisory levels for six additional PFAS found throughout the state. The State Water Board is also in the process of developing Public Health Goals (PHGs) for PFOA and PFOS by late 2022, which is the first step in establishing a Maximum Contaminant Levels (MCLs) for these PFAS.

Monitoring Water Supplies

At Zone 7, protecting public health and safety is the highest priority, including actively monitoring for PFAS in groundwater and surface water supplies. No PFAS have been detected in Zone 7's treated surface water supplies and the Hopyard wellfield. Although Zone 7 detected some PFAS in certain wells, this groundwater was blended and/ or treated using reverse osmosis to reduce the contaminant level below the applicable response level – ensuring that water delivered to our customers met our high standards.

Regulatory Advisory Levels for PFAS (ng/L)

	Stat	te*	
PFAS	Notification Level	Response Level	EPA Lifetime Health Advisory Level**
PFOS	6.5	40	0.02 (interim)
PFOA	5.1	10	0.004 (interim)
PFBS	500	5,000	2,000 (final)
GenX N/A		N/A	10 (final)

* When a contaminant is found at concentrations greater than its advisory level, certain notification requirements and recommendations apply.

**Health advisories are non-enforceable and non-regulatory.

Learn more

Zone 7 will continue to closely monitor the quality of the community's drinking water supplies. As the science advances, we will utilize proven technologies and best practices to ensure that any emerging PFAS issues are managed in a transparent and responsible manner. For more details about PFAS in Zone 7's water supply and how we are ensuring the safety of your water,

visit www.Zone7Water.com/pfas.

					Detected	d PFAS (ng/L)				
WATER SUPPLY SOURCES	PFOS		PF	PFOA		PFBS		HxS	PFHxA	
	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
Mocho Wellfield										
Mocho Well 2 (before treatment)	32	31 - 33	4	4 - 4	6	6 - 6	29	28 - 29	5	4 - 5
Mocho Well 3 (before treatment)	49	45 - 56	6	5 - 6	8	8 - 8	37	34 - 42	7	6 - 8
Mocho Well 4	14	12 - 16	ND	ND - 4	5	4 - 5	15	13 - 16	ND	ND - 4
Blended/Treated Mocho Water	29	21 - 33	ND	ND - 4	6	5 - 6	25	21 - 28	5	4 - 5
Chain of Lakes (COL) Wellfield										
COL Well 1 (before treatment)	38	27 - 46	5	4 - 6	6	5 - 8	31	21 - 39	5	ND - 7
COL Well 2	18	15 - 22	ND	ND - 4	ND	ND - 5	17	14 - 20	ND	ND - 5
COL Well 5 (before treatment)	20	18 - 20	ND	ND	ND	ND	14	12 - 16	ND	ND
Blended COL Water	22	17 - 29	ND	ND - 4	4	ND - 5	19	15 - 25	ND	ND - 5
Stoneridge Well	16	5 - 18	ND	ND	5	5 - 6	18	18 - 19	ND	ND - 4
Hopyard Wellfield (Well 6 and 9)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Treated Surface Water	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

2021 PFAS Monitoring Summary

ng/L = nanograms per liter; ND indicates no detection at or above the Consumer Confidence Report Detection Level (CCRDL) which is 4 ng/L for the above analytes; ND or value in range column indicates that more one sample was collected.

Patterson Pass Water Treatment Plant Ozonation and Expansion Project Update

As part of Zone 7's commitment to high-quality water, we have completed upgrading and expanding the Patterson Pass Water Treatment Plant to utilize a powerful disinfectant called ozone. Ozonation also improves the overall quality of our water by destroying organic matters that impart taste and odor, reducing the formation of chlorine-related byproducts, and treating other contaminants of emerging concern, such as cyanotoxins produced by blue-green algae, endocrine disruptors and pharmaceuticals that can make their way into raw water supplies.

The Patterson Pass Water Treatment Plant is essentially a brand new 24 million-gallon-per-day plant and can provide much needed back-up in case of potential outages at the Del Valle Water Treatment Plant. Additional operational flexibility also provides for a reliable water supply in the event of emergencies such as earthquakes.

We Welcome Your Participation

Zone 7 Water Agency is committed to transparency and invites public participation. You are invited to engage in our public forum and voice questions or concerns about your drinking water. Regular meetings of the Board of Directors are open to the public and held the third Wednesday of each month at 7 p.m. Special meetings are scheduled as needed. Meeting agendas are posted online at www.zone7water.com.



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

(This report contains important information about your drinking water. Translate it, or speak with someone who understands it.)

Educational Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's (USEPA's) Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/ AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).



100 North Canyons Parkway Livermore, CA 94551 925-454-5000 | www.zone7water.com