

LEARN MORE ABOUT

THE WONDROUS WORLD OF WATER

2022 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 2022 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) was completed in June 2022.

Source Water Monitoring and Protection

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 and implementing best management practices, 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, landfills, 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 Reservoir and Lake Del Valle.

Our Primary Water Sources

The water that flows from your tap originated from a number of sources – including snowpack, rainfall and underground aquifers.



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.



Copies of any public outreach materials, source water assessment reports or watershed sanitary surveys are available at www.zone7water.com/water-quality. If you need any more information or have any questions about this report, contact Angela O'Brien at 925-454-5000 or waterquality@zone7water.com.

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.

How Can You Help Protect Source Water?

Communities, citizen groups, and individuals can take an active role in protecting their drinking water sources from contamination.

SOME WAYS TO PROTECT SOURCE WATER

- Limit the use of pesticides and fertilizers
- Reduce excess watering and runoff that washes chemicals into bodies of water
- Dispose of medications properly
- Don't pour household hazardous waste into storm drains, down the drain or on the ground
- Properly maintain your septic system
- Volunteer to participate in community clean-ups

What's in your water?

RAW 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.

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.

How to Read the Table

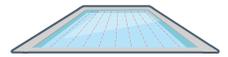
CONTAMINANT	STATE STANDARDS			ZONE 7 RESULTS			
	MCL	DLR (MRL)	PHG (MCLG) [MRDLG]	SURFACE WATER		GROUNDWATER	
				AVERAGE	RANGE	AVERAGE	RANGE
1 SELENIUM µg/L	2 50	3 5	4 30	5 ND	6 NA	7 ND	8 ND-6

- 1 The contaminant being tested for 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.
- 4 Goal levels at which the state would like to keep our results below.
- 5 Running Annual Average (RAA) of Surface Water test results
- 6 Range of results from Surface Water samples
- 7 Running Annual Average (RAA) of Groundwater test results
- 8 Range of results from Groundwater samples

2022 Water Quality Testing Results

JANUARY-DECEMBER 2022 WATER QUALITY DATA - CONTAMINANTS DETECTED IN TREATED WATER SUPPLY								
PRIMARY DRINKING WATER STANDARDS, ESTABLISHED BY THE STATE WATER BOARD								
Distribution System								
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 Monthly Positive Samples 0		Naturally present in the environment		
Total Trihalomethanes (TTHMs), µg/L	80	1*	NA	Highest Locational Running Annual Average 46	Range of All Samples Collected ND - 56		Byproduct of drinking water disinfection	
Haloacetic Acids (five) (HAA5), µg/L	60	1*	NA	22	ND - 47			
Bromate, µg/L	10	5	0.1	ND	ND - 6			
Chloramines as Chlorine, mg/L	Maximum Residual Disinfectant Level (MRDL) = 4.0		[4]	System-wide Running Annual Average (RAA) 2.6	Range of Monthly Average Chloramines 2.4 - 2.9		Drinking water disinfectant added for treatment	
Treated Water Supply Sources								
CONTAMINANT				SURFACE WATER		GROUND WATER		
Turbidity	TT = 1 NTU maximum		NA	Highest Level Found = 0.2 NTU		NA		Soil runoff
	TT = 95% of samples ≤ 0.3 NTU		NA	% of samples ≤ 0.3 NTU = 100		NA		
Total Organic Carbon	TT = Quarterly RAA Removal Ratio ≥ 1.0		NA	Lowest Quarterly RAA Ratio = 1.0		NA		Various natural and manmade sources
Inorganic Chemicals				Average	Range	Average	Range	
Barium, µg/L	1000	100	2000	ND	NA	133	ND - 299	Erosion of natural deposits; discharge of drilling wastes; and discharge from metal refineries
Selenium, µg/L	50	5	30	ND	NA	ND	ND - 6	Erosion of natural deposits; discharge from mines and industrial wastes.
Fluoride, mg/L	2	0.1	1	ND	ND - 0.1	ND	ND - 0.2	Erosion of natural deposits and discharge from fertilizer and aluminum factories
Nitrate as Nitrogen, mg/L	10	0.4	10	ND	ND - 0.8	3	2 - 4	Erosion of natural deposits; runoff from fertilizer use; and leaching from septic tanks and sewage
Radionuclides								
Gross Alpha Particle Activity (pCi/L)**	15	3	(0)	3	3	5	NA	Erosion of natural deposits
Uranium (pCi/L)	20	1	0.43	ND	ND	1	ND - 4	Erosion of natural deposits
SECONDARY DRINKING WATER STANDARDS, ESTABLISHED BY DDW								
Conductivity (µS/cm)	1600		-	571	495-673	965	705-1090	Substances that form ions when in water; seawater influence
Chloride (mg/L)	500		-	91	57 - 132	101	66 - 132	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	0.5	-	50	38 - 59	65	37 - 92	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	1000		-	314	263 - 371	584	436 - 680	Runoff/leaching from natural deposits
Turbidity (NTU)	5	(0.05)	-	ND	ND - 0.1	ND	ND - 0.2	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)	-		-	87	59 - 109	303	231 - 361	Naturally-occurring minerals
Boron (µg/L)	-	100	-	164	100 - 210	709	340 - 1100	Naturally-occurring mineral
Total Hardness as calcium carbonate (mg/L)	-		-	107	89 - 128	363	288 - 460	Naturally-occurring minerals
Potassium (mg/L)	-		-	3.2	2.5 - 4.3	2.1	1.6 - 2.6	Naturally-occurring mineral
Sodium (mg/L)	-		-	79	59 - 106	74	35 - 105	Naturally-occurring mineral
pH (Units)	-		-	8.5	8.1 - 8.7	7.5	7.4 - 7.7	Naturally-occurring minerals
Silica (mg/L)	-		-	8.2	4.7 - 14	27	24 - 30	Naturally-occurring mineral

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



There are 2.5 million liters of water in an Olympic-size swimming pool



mg/L = Milligrams/Liter or parts per million (ppm)

About 1/2 cup of salt in the pool

µg/L = Micrograms/Liter or parts per billion (ppb)



About 1 pinch of salt in the pool

ng/L = Nanograms/Liter or parts per trillion (ppt)

About 1 grain of salt in the pool

NOTES: * TTHMs each component DLR is 1 µg/L. HAA5 each component DLR is 1 µg/L except Monochloroacetic acid that has DLR of 2 µg/L. ** Gross alpha data is from 2017 except Hopyard well 9 that was sampled in 2022.

Abbreviations/Units:
MCL = Maximum Contaminant Level, DLR = Detection Limit for Purposes of Reporting (State Water Board established), MRL = Method 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, µg/L = Micrograms per liter, mg/L = Milligrams per liter, µS/cm = Microsiemens per centimeter, pCi/L = PicoCuries per liter, ND = Monitored for but not detected at or above DLR or MRL.

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.

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 Treated Water Supply

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.



Learn more

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

www.zone7water.com/worldofwater

PRIMARY STANDARDS			
Contaminants Not Detected			
Organic Chemicals		Inorganic Chemicals	Radionuclides
Volatile Organic Chemicals (VOCs)	Synthetic Organic Chemicals (SOCs)		
Benzene Carbon Tetrachloride 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene trans-1,2-Dichloroethylene Dichloromethane 1,2-Dichloropropane 1,3-Dichloropropane Ethylbenzene Methyl-tert-butyl ether (MTBE) Monochlorobenzene Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Trichlorofluoromethane 1,1,2-Trichloro-1,2,2-Trifluoroethane Vinyl Chloride Xylenes	Alachlor Atrazine Bentazon Benzo(a)pyrene Carbofuran Chlordane 2,4-D Dalapon Dibromochloropropane (DBCP) Di(2-ethylhexyl)adipate Di(2-ethylhexyl)phthalate Dinoseb Diquat Endothall Endrin Ethylene Dibromide (EDB) Glyphosate Heptachlor Heptachlor Epoxide Hexachlorobenzene Hexachlorocyclopentadiene Lindane Methoxychlor Molinate Oxamyl Pentachlorophenol Picloram Polychlorinated Biphenyls Simazine Thiobencarb Toxaphene 2,3,7,8-TCDD (Dioxin) 1,2,3-Trichloropropane (TCP) 2,4,5-TP (Silvex)	Arsenic Antimony Asbestos Beryllium Cadmium Chromium Cyanide Mercury Nickel Nitrite (as nitrogen) Perchlorate Thallium Zinc	Radium-226, Radium-228 Beta/Photon emitters Tritium, Strontium-90
NOTES: None of the primary standards listed were detected at or above DLR in Zone 7 water supply during 2022 monitoring.			

Regulated Contaminants with SECONDARY DRINKING WATER STANDARDS		
Contaminants Not Detected		
Aluminum	Methyl-tert-butylether (MTBE)	NOTES: None of the secondary standards listed above were detected at or above DLR in Zone 7 water supply during 2022 monitoring.
Color	Odor-Threshold	
Copper	Silver	
Foaming Agents (MBAS)	Thiobencarb	
Manganese		

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	No. OF SAMPLES COLLECTED	90TH PERCENTILE LEVEL DETECTED	No. OF SITES EXCEEDING AL	ACTION LEVEL (AL)	PHG
Lead (µg/L)	12	7	None	15	0.2
Copper (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.

What are PFAS (Per- and Polyfluoroalkyl Substances)?

PFAS are a group of synthetic chemicals 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. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals. Although certain PFAS are no longer manufactured in the U.S., these chemicals are still produced internationally and imported into the U.S. in consumer goods.

What is Zone 7 doing about PFAS?

At Zone 7, protecting public health and safety is our highest priority.

Zone 7 has been actively monitoring for PFAS since late 2018. No PFAS have been detected in its treated surface water which makes up the majority of the water delivered to customers. Although PFAS have been detected in some Zone 7 groundwater wells, these wells are either below the response levels or are treated to levels below the response levels prior to entry into the distribution system. Groundwater is typically used for meeting peak day demand or when surface water supply is limited.

How do PFAS get into the drinking water?

Since PFAS are used in an array of industrial and consumer products, there could be many sources of contamination in our water supplies. Common pathways for PFAS to enter our water supplies include through locations where PFAS are manufactured or used, areas where fire-fighting foam was used, wastewater treatment plants, and landfills.

PFAS Regulatory Update

The science and the regulatory development on PFAS are constantly evolving. There are currently no federal or state drinking water standards for these chemicals. However, the U.S. Environmental Protection Agency (USEPA) anticipates finalizing the agency's PFAS regulations for six PFAS by the end of 2023, including setting maximum contaminant levels (MCLs) for the two most common PFAS (PFOA and PFOS) at 4 nanograms per liter (ng/L) each. For more information, visit www.epa.gov/pfas.

In addition, the state of California is developing its own PFAS standards; for more information, visit www.waterboards.ca.gov/pfas.

Terms to Know

NOTIFICATION LEVEL represents the concentration level of a contaminant in drinking water that does not pose a significant health risk but warrants notification.

RESPONSE LEVEL represents the concentration level of a contaminant in drinking water at which water systems should take additional actions such as taking a water source out of service or providing treatment.

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.



2022 PFAS Detection Summary

JANUARY-DECEMBER 2022 WATER QUALITY DATA - CONTAMINANTS DETECTED IN TREATED WATER SUPPLY

Per- and Polyfluoroalkyl Substances (PFAS) DRINKING WATER STANDARDS, established by the State Water Board

Per- and Polyfluoroalkyl Substances (PFAS)	Response Level	Notification Level	CCRDL	SURFACE WATER		GROUNDWATER		MAJOR SOURCES IN DRINKING WATER	NOTES:
				Average	Range	Average	Range		
PERFLUOROBUTANESULFONIC ACID (PFBS), ng/L	5000	500	4	ND	NA	5	ND - 7	Various man-made sources	Abbreviations/Units: CCRDL = Consumer Confidence Report Detection Level (State Water Board established) ng/L = Nanograms per liter, NA = Not Applicable, ND = Monitored for but not detected at or above CCRDL.
PERFLUOROCTANE SULFONIC ACID (PFOS), ng/L	40	6.5	4	ND	NA	20	ND - 32		
PERFLUOROCTANOIC ACID (PFOA), ng/L	10	5.1	4	ND	NA	ND	ND - 4		
PERFLUOROHXANE SULFONIC ACID (PFHxS), ng/L	NA	NA	4	ND	NA	19	ND - 28		
PERFLUOROHXANOIC ACID (PFHxA), ng/L	NA	NA	4	ND	NA	4	ND - 5		



Proactively addressing PFAS

Both of these projects are important to Zone 7's continuing effort to supply the Tri-Valley with safe, reliable water.

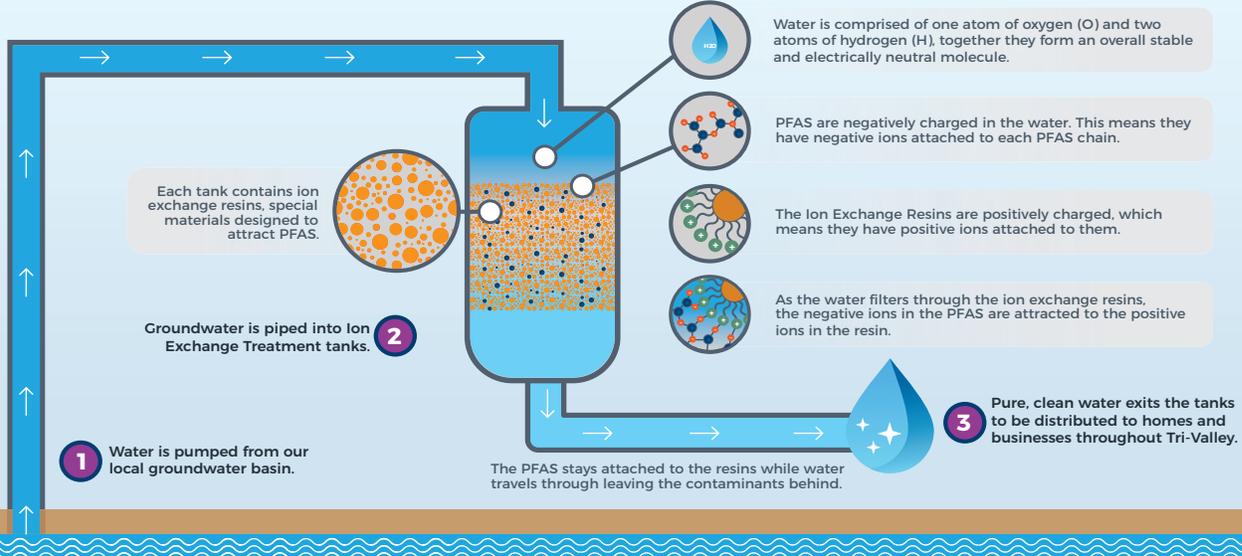
Zone 7 is proactively in the process of planning, designing, and constructing new PFAS treatment facilities in anticipation of new regulations. We are implementing a new proven technology called Ion Exchange (IX) treatment process to remove Per- and Polyfluoroalkyl substances (PFAS) from two of our groundwater facilities.

Construction for the Stoneridge Well Treatment Plant began in February 2023 and will be online in late summer of 2023, with all construction complete early in 2024. The Chain-of-Lakes Wellfield Treatment Plant will begin construction soon and is expected to be online by summer 2024.

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.

ION EXCHANGE TREATMENT PFAS Removal Process



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.



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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.