2025
City of Vacaville Water Quality Report to Consumers

**Este informe contiene información muy importante sobre su agua para beber.
Favor de comunicarse con City of Vacaville Water Quality Laboratory al
(707) 469-6400 para asistirlo en español.**

2025 CITY OF VACAVILLE WATER QUALITY REPORT

The City of Vacaville is pleased to report that your drinking water is safe, reliable, and in compliance with all state and federal quality standards in 2025. Last year, the City distributed over 5.62 billion gallons of high-quality water, backed by extensive safety testing. Our team performed approximately 5,100 analyses on water samples to monitor both regulated and non-regulated substances, ensuring the highest level of safety for our customers.

While all drinking water, including bottled water, may contain trace amounts of some contaminants, their presence does not necessarily mean the water poses a health risk. For more details on water safety and potential health effects, you can call the USEPA Safe Drinking Water Hotline at (800) 426-4791. If you have specific questions about Vacaville's water quality, please contact Michael Torres, Water Quality Laboratory Supervisor, at (707) 469-6439 or Michael.Torres@cityofvacaville.gov. We also encourage you to visit the City website and attend City Council meetings to stay informed on local water topics.

SOURCES OF WATER

Vacaville's water supply in 2025 consisted of two surface water sources and 8 active deep groundwater wells. Lake Berryessa surface water, conveyed through Putah South Canal (PSC), provided 55.5% of the City's total consumption of water in 2025, and the Sacramento Delta surface water, from the North Bay Aqueduct (NBA), provided an additional 14.6%. Groundwater from the 8 deep wells currently in production made up the balance (29.9%) of our water needs. Treatment of the surface water is divided between the Vacaville Water Treatment Plant (VWTP) and the North Bay Regional Water Treatment Plant (NBR). The VWTP treats PSC source water only, while the NBR plant, which is jointly owned by the cities of Vacaville and Fairfield, treats both PSC and NBA source water.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER

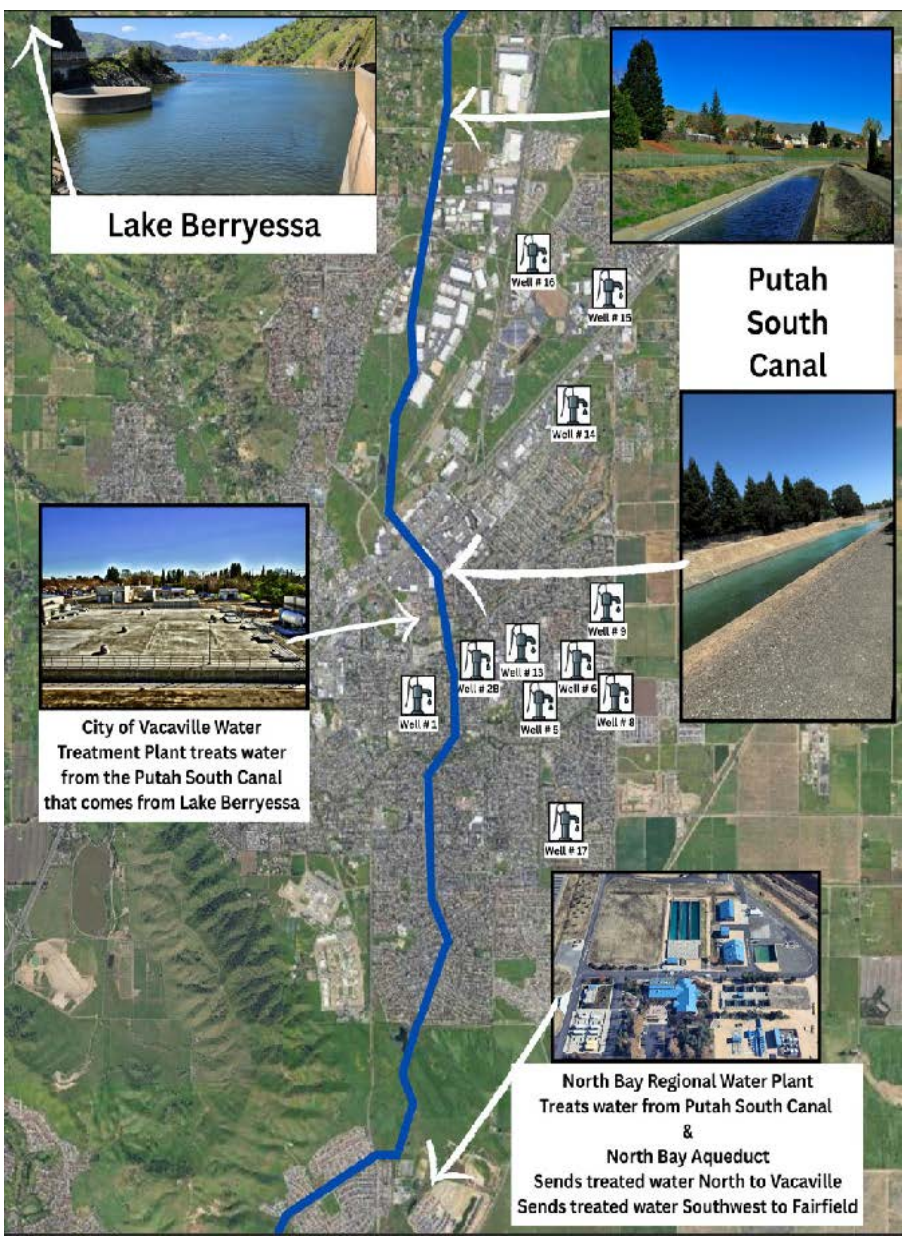
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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 sewage treatment plants, septic systems, agricultural livestock operations, 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, that 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, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

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. EPA's Safe Drinking Water Hotline (1-800-426-4791).

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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.

City of Vacaville Water Sources



HEALTH RELATED INFORMATION

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 for infections. These people should seek advice from their health care providers about drinking water. USEPA and Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

WATERSHED SANITARY SURVEYS AND VULNERABILITY ASSESSMENTS

A Watershed Sanitary Survey evaluates the quality of water that is used in a community drinking water supply in order to identify factors and constituents having the capacity to compromise drinking water quality. The California State Water Project 2021 Watershed Sanitary Survey Update (completed in June 2022) is latest summary report for the Sacramento Delta which includes the North Bay Aqueduct (NBA). The Solano County cities treating NBA water, in conjunction with the Solano County Water Agency, have implemented watershed management practices to improve water quality and reduce the significance of the potential contaminant sources.

The latest Watershed Sanitary Survey (Solano Project Below Monticello Dam 2022 Watershed Sanitary Survey) for Putah South Canal (PSC) was completed in 2024. The results of the assessment survey indicated that PSC is potentially vulnerable to contaminants from illegal dumping, spills related to vehicle collisions, agricultural-related activities and applications, and recreational use. Management measures along the canal have been implemented that mitigate the risk for each of these potential contributing activities.

The assessments for Vacaville's groundwater wells were performed in 2002, 2003, and 2005. The wells are considered most vulnerable to automobile gas stations, chemical and petroleum processing and storage, dry cleaners, septic systems, sewer collection systems, agricultural drainage, agricultural wells and irrigation wells. The wells offer various levels of protection from possible contaminating activities (PCAs) due to factors such as the aquifer, deep water table intakes, well construction features and physical barriers. Copies of the Watershed Sanitary Surveys can be obtained through the SWRCB, Division of Drinking Water (DDW), San Francisco District Office, 850 Marina Bay Parkway, Bldg. P, 2nd Floor, Richmond, California 94804. You may request that a summary be sent to you by contacting the SWRCB, Division of Drinking Water, at (510) 620-3474.

HEXAVALENT CHROMIUM IN VACAVILLE'S DRINKING WATER

Chromium is a metallic chemical that occurs naturally in some of Vacaville's deeper ground water aquifers. Chromium may be present in water sources in two forms: trivalent chromium (Cr+3) and hexavalent chromium (Cr+6). The combination of both forms is referred to as Total Chromium. Chromium+3 is found naturally in foods at low levels and is an essential human dietary nutrient that is often medically prescribed to maintain healthy insulin metabolism. Chromium+6 is the toxic form of chromium that has been found to cause cancer in humans when inhaled and is suspected to cause cancer when ingested.
In April 2024, the California State Water Resources Control Board (SWRCB) adopted a new regulation setting the Maximum Contaminant Level (MCL) for Cr+6 at 10 ppb. The regulation became effective on October 1, 2024

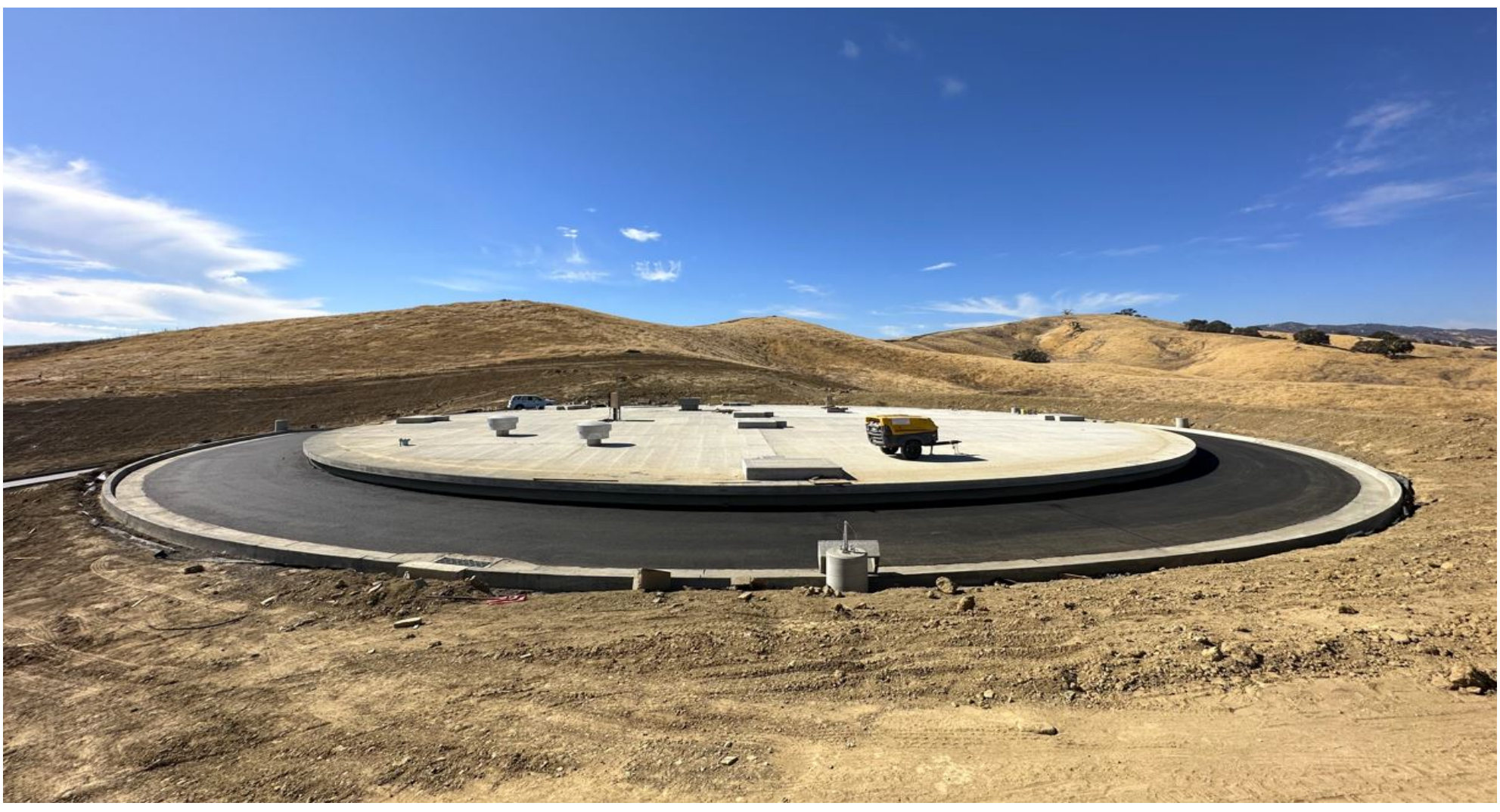
Chromium (hexavalent) was detected at levels that exceed the chromium (hexavalent) MCL. While a water system of our size is not considered in violation of the chromium (hexavalent) MCL until after October 1, 2026, we are working to address this exceedance and comply with the MCL. Specifically, we are in the process of adding new water sources that do not exceed the MCL, while also evaluating reduction options for the few sources that do exceed the hexavalent chromium MCL. The City has an approved Hexavalent Chromium Compliance Plan, which includes our current and planned actions for drilling new wells and installing treatment technology to meet the hexavalent chromium MCL. The Compliance Plan, and approval letter from the state is posted on the City website at www.CityofVacaville.gov/ChromVI.

KEEP THE LEAD OUT OF DRINKING WATER

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. The City of Vacaville is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Mindy Boele, Water Quality Manager, at (707) 469-6430 or Mindy.Boele@CityofVacaville.gov. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead

ARSENIC IN DRINKING WATER

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.



DATA TABLES

The following tables list all of the drinking water contaminants that were detected during the most recent sampling for constituents. To read the tables, start with the far left column titled ***Constituent*** or ***Contaminant*** and read across the row. Units express the amount measured. The ***MCL*** is the highest amount of the substance allowed. ***PHG*** (***MCLG***) is the goal amount for that substance, which may be a lower amount than the amount allowed. The ***Range*** reports the lowest and highest amounts detected, and the ***Average*** is the annual average. ***Contaminant Sources*** describe where the substance usually originates. To better understand the report, refer to the Legend table that includes definitions of the terns used.

Table 1- SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

MICROBIOLOGICAL CONTAMINANT	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Contaminant Sources
Total Coliform Bacteria	**0.9%**	**0**	**5% (1374 samples collected in 2025)**	**0**	Naturally present in the environment.
Fecal Coliform Bacteria	**0**	**0**	**A routine sample and a repeat sample detect for total coliform and either sample also detects for fecal coliform.**	**0**	Human and animal fecal waste.

Table 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER IN DISTRIBUTION SYSTEM

CONSTITUENT (reporting units)	No. of Samples (2023)	90th Percentile Detected	No. Sites exceeding AL	AL	PHG	Contaminant Sources
Lead (ppb) [a]	**59**	**<0.005**	**0**	**15**	**0.2**	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)[a]	**59**	**0.16**	**0**	**1.3**	**0.3**	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Table 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS [b]

CONSTITUENT (reporting units)	2023 - 2025 GROUNDWATER		2025 TREATED SURFACE WATER from NBR		2025 TREATED SURFACE WATER from VWTP		Contaminant Sources
	Range	Average	Range	Average	Range	Average	
Hardness (ppm)	**76-300**	**179**	**127 - 180**	**155**	**NA**	**160**	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring.
Sodium (ppm)	**43-80**	**57**	**23-40**	**29**	**NA**	**17**	Salt present in the water and is generally naturally occurring.

Table 4 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

CONSTITUENT (reporting units)	MCL	PHG (MCLG)	2023-2025 GROUNDWATER		2025 TREATED SURFACE WATER from NBR		2025 TREATED SURFACE WATER from VWTP		Contaminant Sources
			Range	Average	Range	Average	Range	Average	
Aluminum (ppm)	**1**	**0.6**	**ND**	**ND**	**0.025 - 0.038**	**0.031**	**NA**	**ND**	Erosion of natural deposits; residue from some surface water treatment processes.
Arsenic (ppb)	**10**	**0.004**	**ND - 6.3**	**2.7**	**ND**	**ND**	**NA**	**ND**	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Barium (ppm)	**1**	**2**	**0.07 - 0.14**	**0.10**	**0.037 - 0.052**	**0.043**	**NA**	**ND**	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits.
Chromium, total (ppb)	**50**	**(100)**	**ND -25**	**7.7**	**ND - 2.1**	**0.8**	**NA**	**ND**	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits.
Fluoride (ppm)[c]	**2.0**	**1**	**System-wide annual average = 0.72, minimum = 0.6, maximum = 0.87**						Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate as N (ppm)	**10**	**10**	**ND - 3.3**	**1.4**	**ND - 0.1**	**0.03**	**ND - 0.12**	**0.06**	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Selenium (ppb)	**50**	**30**	**ND - 4.8**	**1.2**	**ND**	**ND**	**NA**	**ND**	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive).
Chromium, Hexavalent (ppb)	**10**	**0.02**	**1.8 - 23**	**11**	**NA**	**NA**	**NA**	**0.92**	Erosion of natural deposits; transformation of naturally occurring trivalent chromium to hexavalent chromium by natural processes and human activities such as discharges from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, fertilizer and aluminum factories.
					2025 UNTREATED SURFACE WATER				
					Northbay Aqueduct		**NBR Putah South Canal**		
					Range	**Average**	**Range**	**Average**	
					0.09 - 0.12	**0.11**	**0.28 - 0.36**	**0.32**	
CONSTITUENT (reporting units)	**MCL**	**PHG (MCLG)**	**2020-2025 GROUNDWATER**		**2020 TREATED SURFACE WATER from NBR**		**2020 TREATED SURFACE WATER from VWTP**		**Contaminant Sources**
			Range	**Average**	**Range**	**Average**	**Range**	**Average**	
Gross Alpha Activity (pCi/L)	**15**	**0**	**1.9 - 6.0**	**3.4**	**NA**	**NA**	**NA**	**2.8**	Erosion of natural deposits.

Table 5 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD [d]

CONSTITUENT (reporting units)	MCL	2023-2025 GROUNDWATER		2025 TREATED SURFACE WATER FROM NBR		2025 TREATED SURFACE WATER FROM VWTP		Contaminant Sources
		Range	Average	Range	Average	Range	Average	
Aluminum (ppb)	**200**	**ND**	**ND**	**25 - 38**	**31**	**NA**	**ND**	Erosion of natural deposits; residual from some surface water treatment processes.
Chloride (ppm)	**500**	**7.4 - 78**	**22**	**9.4 - 23**	**14**	**NA**	**14**	Runoff/leaching from natural deposits; seawater influence.
Color (units)	**15**	**ND - 5**	**4**	**ND**	**ND**	**NA**	**5**	Naturally-occurring organic materials.
Copper (ppm)	**1.0**	**ND**	**ND**	**0.0012- 0.0021**	**0.0017**	**NA**	**ND**	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Odor- Threshold (units)	**3**	**ND - 1.3**	**0.2**	**1.4**	**1.4**	**2 - 11**	**6.7**	Naturally-occurring organic materials.
Specific Conductance (µS/cm)	**1600**	**450 - 820**	**593**	**355 - 501**	**421**	**NA**	**400**	Substances that form ions when in water; seawater influence.
Sulfate (ppm)	**500**	**3.7 - 68**	**36**	**38 - 66**	**49**	**NA**	**25**	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids (ppm)	**1000**	**290 - 530**	**379**	**180 - 280**	**228**	**NA**	**220**	Runoff/leaching from natural deposits.
Turbidity (units)[e]	TT=5.0 NTU TT=95% of samples ≤0.5 NTU	**ND - 1.3**	**0.41**	**0.04 - 0.07**	**0.06**	**NA**	**0.34**	Soil runoff.

Table 6 - DETECTION OF UNREGULATED CONTAMINANTS (UCMR5)

CONSTITUENT		Units	Min. RL	2023 - 2025 TREATED GROUNDWATER		2023 - 2025 TREATED SUTFACE WATER from VWTP		UCMR 5
				Range	Average	Range	Average	
perfluorooctanoic acid	**PFOA**	ppt	**4**	**ND - 5.1**	**0.36**	**ND**	**ND**	The Safe Drinking Water Act (SDWA) requires that once every five years the United States Environmental Protection Agency (EPA) issue a list of unregulated contaminants to be monitored by public water systems (PWSs). The U.S. Environmental Protection Agency (EPA) issued the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) in December 2021. Under this mandate, public water systems (PWS) must conduct monitoring for lithium and 29 per- and polyfluoroalkyl substances (PFAS). The table details the detected analytes alongside their respective minimum reporting levels (MRLs) The City of Vacaville began monitoring in 2023 and completed the UCMR5 program data collection in 2025.
perfluorooctanesulfonic acid	**PFOS**	ppt	**4**	**ND - 10**	**1.4**	**ND**	**ND**	
perfluorohexanesulfonic acid	**PFHxS**	ppt	**3**	**ND - 9.2**	**1.6**	**ND**	**ND**	
perfluorobutanesulfonic acid	**PFBS**	ppt	**3**	**ND - 3.7**	**0.53**	**ND**	**ND**	
lithium	**Li**	**ppb**	**9**	**17-45**	**26**	**ND**	**ND**	

Table 7 - DETECTION OF DISINFECTION BYPRODUCTS

Constituent (reporting units)	MCL	PHG (MCLG)	2025 Range	2025 Average	2025 Violations	Contaminant Sources
Total Trihalomethanes (ppb)	**80**	**NA**	**6 - 65**	**37**	**0**	By-product of drinking water disinfection.
Halo-Acetic Acids (ppb)	**60**	**NA**	**2.4 - 33**	**12**	**0**	By-product of drinking water disinfection.

Constituent (reporting units)	MCL or MRDL	MCLG or MRDLG	Average	Minimum	Maximum	Contaminant Sources
DBP Precursors/TOC (ppm)	**TT**	**NA**	**2.3**	**1.7**	**3.0**	Various natural and man-made sources.
Chlorine (ppm)	**4.0**	**4**	**0.72**	**<0.1**	**1.74**	Drinking water disinfectant added for treatment.

Table 8 - DETECTION OF CONTAMINANTS WITH NOTIFICATION LEVELS

Constituent (reporting units)	Notification Level	2025 GROUNDWATER		2025 TREATED SURFACE WATER from NBR		2025 TREATED SURFACE WATER from VWTP		Health Effects
		Range	Average	Range	Average	Range	Average	
perfluorobutanesulfonic acid (PFBS)	**500**	**ND - 3.1**	**0.39**	**ND**	**ND**	**NA**	**ND**	Perfluorobutane sulfonic acid exposures resulted in decreased thyroid hormone in pregnant female mice.
perfluorooctanesulfonic acid (PFOS)	**6.5**	**ND - 3.7**	**0.89**	**ND**	**ND**	**NA**	**ND**	Perfluorooctanesulfonic acid exposures resulted in immune suppression and cancer in laboratory animals.
perfluorohexanesulfonic acid (PFHxS)	**3**	**ND - 5.3**	**1.3**	**ND**	**ND**	**NA**	**ND**	Perfluorohexane sulfonic acid exposures resulted in decreased total thyroid hormone in male rats.
perfluorooctanoic acid (PFOA)	**5.1**	**ND**	**ND**	**ND**	**ND**	**NA**	**ND**	Perfluorooctanoic acid exposures resulted in increased liver weight and cancer in laboratory animals.
perfluorooctanoic acid (PFOA) - from **UCMR 5 *Treated* Groundwater (2023-2025)**	**5.1**	**ND - 5.1**	**0.36**					

FOOTNOTES

(a) This is the state action level for samples collected inside schools and homes. The 90th percentile reflects the concentration of lead or copper at which 90% of the samples tested were found to have not exceeded. Household lead and copper results are from July-September 2023.

(b) There are no drinking water standards (MCLs, PHGs or MCLGs) for these constituents, they are just reported for customer information. To convert hardness data from ppm to grains per gallon, divide by 17.1.

(c) Not possible to differentiate water source. The City of Vacaville treats the water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. The fluoride levels in the treated water are maintained within the range of 0.7 - 1.3 ppm, as required by the California Department of Public Health regulations.

(d) Secondary MCLs do not have PHGs or MCLGs because secondary MCLs are set to protect the aesthetics (odor, tastes, and appearance) of drinking water, and PHGs and MCLGs are based on health concerns.

(e) Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

LEGEND

- **MCL (Maximum Contaminant Level)**: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- **Secondary MCL:** Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- **MCLG (Maximum Contaminant Level Goal)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
- **PHG (Public Health Goal):** The level of a contaminant in drinking water be-low which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
- **PDWS (Primary Drinking Water Standard)**: MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.
- **MRDL (Maximum Residual Disinfectant Level):** 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.
- **MRDLG (Maximum Residual Disinfectant Level Goal)**: The level of a 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
- **AL & NL (Regulatory Action Level or Notification Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow
- **TT (Treatment Technique)**: A required process intended to reduce the level of a contaminant in drinking water.
- **NA**: Not Applicable or Not Available.
- **ND**: Not Detected.
- **NTU (Nephelometric Turbidity Units)**: Standard unit for turbidity.
- **pCi/L:** Picocuries per Liter.
- **µS/cm**: microsiemens per centimeter Unit of measure for conductance.
- **ppm**: parts per million or milligrams per liter (mg/L). Equivalent to 1 second in 11.5 days.
- **ppb:** parts per billion or micrograms per liter (µg/L). Equivalent to 1 second in 32 years.
- **ppt**: parts per trillion or nanograms per liter (ng/L). Equivalent to 1 second in nearly 32,000 years