

2024



Annual Drinking Water Quality Report



QUALITY | VALUE | RELIABILITY | CUSTOMER SERVICE



City of San Diego's Tap Water Supply Meets All State and Federal Health Standards in 2024

The City of San Diego is committed to providing you with a clean, safe and stable water supply. It's the priority of every employee of the City's Public Utilities Department. Those efforts matter. Based on the water quality monitoring data collected in 2024, the City's tap water met all state and federal drinking water health standards, which are the primary standards for treating and monitoring water. The U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board mandate all water agencies produce an annual document educating customers about their drinking water quality for the previous year. This annual Drinking Water Quality Report details the origin of the City's water supply, what it contains and how it meets health standards.



Message from the Public Utilities Director

The 2024 Annual Drinking Water Quality Report provides important information about the quality of your drinking water, the source of your water supply and the efforts we make every day to ensure it meets or exceeds all federal and state standards.

This report includes detailed results from water quality testing conducted throughout the year, along with information about potential contaminants, how they are addressed and what they mean for your health. We want you to feel confident about the water you drink and informed about how it is treated and monitored.

Our mission at the City of San Diego Public Utilities Department is to deliver safe, clean and reliable drinking water to our customers. Highlights of the past year include:

- Maximizing the use of local water. In 2024, we captured and stored about 19.5 billion gallons of runoff, enough water to supply our 1.4 million customers for approximately 130 days.
- The latest Water Service Line Inventory found no lead water service lines in the City's entire system, further affirming the safety and quality of the water we supply to all communities.
- Customer service improvements have led to a 92% drop in customer call wait times and a 90% reduction in the held bill backlog. Customer satisfaction is high with our customers, with 85% saying they are very satisfied or satisfied with the department's level of service.

We remain committed to maintaining the highest standards of water quality and customer service. Thank you for your continued trust in the services we provide.

Thank you,

Juan Guerreiro
Director of Public Utilities
City of San Diego

CONTACT

Public Utilities Emergency Hotline.....	619-515-3525
General and Billing Information.....	619-515-3500
Water Quality Lab.....	619-668-3232
drinkingwaterquality@sandiego.gov	
Capital Improvements Projects.....	619-533-4207
City Reservoirs Recreation.....	619-668-2050
Pure Water Program.....	619-533-6638
Stormwater Pollution Prevention.....	619-235-1000
Report Water Waste.....	619-533-5271

VISIT

City of San Diego Public Utilities.....	sandiego.gov/public-utilities
San Diego County Water Authority.....	sdcwa.org
Metropolitan Water District.....	mwdh2o.com
California Division of Drinking Water.....	waterboards.ca.gov
U.S. EPA.....	water.epa.gov/drink
American Water Works Association.....	awwa.org
Be Water Wise.....	bewaterwise.com
Pure Water Program.....	purewatersd.org
Think Blue.....	thinkblue.org

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WATER SUPPLY What's in Your Water Before It's Treated?



To protect public health, the U.S. Environmental Protection Agency and State Water Resources Control Board regulate contaminant levels in public water supplies. Similarly, the U.S. Food and Drug Administration and California law set standards for bottled water. Drinking water, including bottled water, may reasonably contain small amounts of contaminants. This presence does not necessarily pose a health threat.

Drinking water sources—including tap and bottled—originate from rivers, lakes, streams, reservoirs, springs, and wells. As water travels over the land or filters through the ground, it may absorb naturally occurring minerals and, in some cases, radioactive substances. It can also carry contaminants from animals or human activity.

Potential contaminants in source water include:

- 💧 Microbial contaminants like viruses and bacteria, which can come from septic systems, wastewater treatment plants, livestock, or wildlife.
- 💧 Inorganic contaminants such as salts and metals, which may occur naturally or result from farming, mining, industrial discharges, or urban runoff.
- 💧 Pesticides and herbicides that stem from agriculture, landscape maintenance, or urban runoff.
- 💧 Organic chemical contaminants, including synthetic and volatile organics, that arise from industrial processes, petroleum production, gas stations, and septic systems.
- 💧 Radioactive contaminants, which can be naturally present or linked to mining and energy production.

To help ensure the safety of our drinking water sources, we conduct comprehensive sanitary surveys of local watersheds at least once every five years. These surveys cover the El Capitan, Murray, San Vicente, Sutherland, Barrett, Morena, Otay, Upper Otay, Hodges, and Miramar watersheds. The most recent survey was completed in 2020. It identified several potential sources of contamination, including wildfire-related runoff, erosion, geological fault activity, and naturally occurring metals. Other potential vulnerabilities include impacts from wildlife and livestock, aging or failing septic systems, recreational activities, urban stormwater runoff, and nearby transportation infrastructure.

To review the complete Watershed Sanitary Surveys please visit the following link: [Watershed Sanitary Survey | City of San Diego Official Website](#)

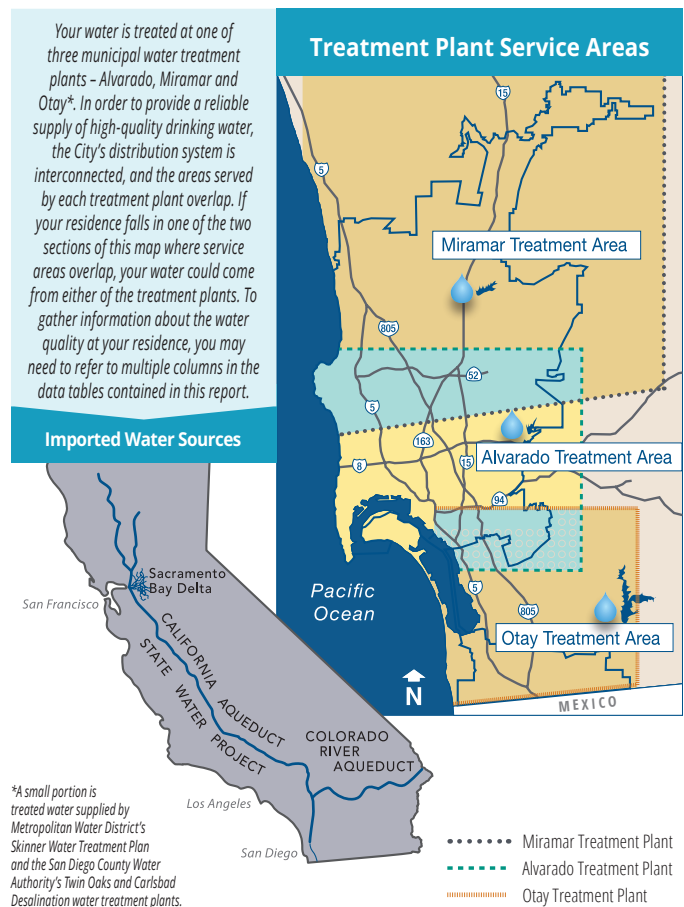
Imported Water Supply and the Impact on Water Quality

The City of San Diego currently imports most of its water supply, the bulk of which is raw (*untreated*) water purchased from the San Diego County Water Authority. All raw water is treated before entering the City's drinking water distribution system.

Less than 10% of the imported water purchased from the County Water Authority is a blend of treated water from the Metropolitan Water District's Skinner Water Treatment Plant, the County Water Authority's Twin Oaks Valley Water Treatment Plant and the Carlsbad Desalination Plant.

Most of the imported water from the County Water Authority is a blend from the Colorado River and State Water Project (*see map below*).

Throughout the year, the ratio of water from each source changes. The constituents that make up the City's source water are influenced by the water source, climate, geology and the land activities that they flow through. The City continually monitors the source water and adjusts its treatment process to ensure that the water is always healthy and safe.



HOW DO WE MAKE WATER DRINKABLE?

Water Treatment

The City's Public Utilities Department provides high-quality drinking water by utilizing proven technology, modern facilities and state-certified operators. Water is treated using several processes, with each process providing additional water quality improvements. Using several treatment processes provides multiple barriers for added levels of safety. Our treatment plants employ a combination of time-tested conventional water treatment processes and innovative disinfection strategies. Both Alvarado and Miramar water treatment plants use ozone for primary disinfection, while the Otay Water Treatment Plant uses chlorine dioxide. Conventional water treatment consists of coagulation, flocculation, sedimentation and sand/multimedia filtration. This cost-effective, proven method of treatment is used throughout the modern world.

Stages of our Water Treatment

WATERSHED PROTECTION: Protecting the watersheds prevents contamination of our water supply and is the most cost-effective process in water treatment. Extensive measures are taken to prevent contamination of our local and imported water. If you see "No Swimming" or "No Dumping" signs posted near water supplies, this is for the protection of your drinking water. The latest Watershed Sanitary Survey, which contains information on the City's watersheds, including water quality and vulnerabilities, is available at: sandiego.gov/public-utilities/water-quality/watersheds/sanitary-survey

COAGULATION: This is the chemical process of rapidly mixing coagulants into the water entering the water treatment plant. Many of the particles in the source water have negative charges, causing them to repel each other, much like two magnets when the negative ends are put together. Coagulation changes these negative charges to neutral.

FLOCCULATION: Coagulated water is slowly mixed causing the neutral particles to collide. When the collisions occur, the particles clump together forming floc. As the floc is formed, particles in the water are trapped within the floc. The floc looks like snowflakes suspended in the water.

SEDIMENTATION: The floc particles are heavier than water. Mixing is stopped and the water slowly flows through the sedimentation basins, during which the floc settles to the bottom and is removed. The clear water is collected from the top of the sedimentation basins.

DISINFECTION, PRIMARY: Drinking water is further treated to remove or inactivate viruses, bacteria and other pathogenic organisms. Disinfection is accomplished in a variety of methods. The Alvarado and Miramar water treatment plants use ozone as the primary disinfectant. The Otay Water Treatment Plant uses chlorine dioxide as the primary disinfectant. These are advanced disinfection processes and have the advantage of providing higher quality water with better taste.

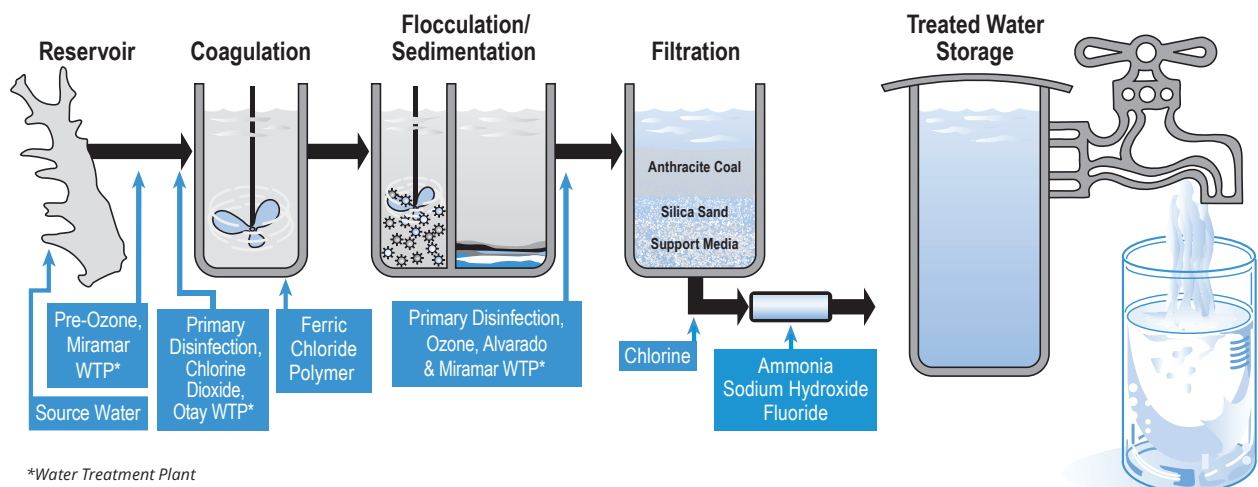
FILTRATION: Water is passed through deep filtration beds to produce water that is crystal clear. Extremely small particles are removed during this process. San Diego's water treatment plants produce water with turbidity (cloudiness) significantly better than drinking water standards, indicating a highly effective treatment process and resulting in high-quality drinking water.

DISINFECTION, SECONDARY: Chloramines are created by adding chlorine and ammonia to the water. Chloramines help prevent microbial contamination from occurring in the water distribution system, the series of pipes that deliver water from the treatment plants to homes and businesses.

CORROSION CONTROL: The corrosivity of the water is controlled by adjusting the pH.

NOTICE OF VIOLATIONS:

The State Water Board has determined that the City has failed to implement a cross-connection control program in compliance with CCR, Title 17, Sections 7584 (c), and 7604. Specifically, there are 11,543 identified services needing backflow protection devices that have not been installed. To return to compliance, the City will work with customers and developers to ensure proper backflow protection devices are installed to City standards. To date, a total of 4,468 devices have either been surveyed and determined to not need a backflow or have had a backflow installed.



*Water Treatment Plant



WATER QUALITY REPORT CARD

This Water Quality Report Card shows the state of your water.
This year, our water met all federal and state standards.

Potential Contaminants	Why We Test for It	Likely Source	Your Water Source	
Microbes Microscopic organisms such as Coliform bacteria, Giardia and Cryptosporidium	Can make people sick after drinking several glasses.	Naturally present in the environment or from animals or human activity.	Surpasses state and federal water quality requirements.	
Copper and Lead	High levels can cause health issues over an extended period of time.	Corrosion of indoor plumbing.	Surpasses state and federal water quality requirements.	
Disinfection Byproducts of the process of disinfecting drinking water-trihalomethanes and haloacetic acids	High levels can cause health issues over an extended period of time.	Water disinfection process.	Surpasses state and federal water quality requirements.	
Turbidity – cloudiness of water from suspended particles in the water	Less turbid water indicates high water quality.	Soil Runoff	Surpasses state and federal water quality requirements.	
Fluoride	High levels can cause marks on teeth over an extended period of time.	Erosion of natural deposits and mandated water additive for dental health.	At the optimal CDC recommended level.	

The U.S. Environmental Protection Agency’s Lead and Copper Rule Revisions (LCRR) require the City to identify the pipe material of the customer-owned service lines between the water meter and your home or business and the City-owned service line to the water main to determine if lead is present. The City has completed its initial inventory, which did not identify any lead in the system, and is in the process of completing additional verifications that are required under the LCRR. If you would like more information, please visit sandiego.gov/service-line-inventory.





City Makes Progress with Pure Water Projects

Work continues to progress on Pure Water San Diego, the City of San Diego's phased, multi-year program that will provide San Diego with a reliable, locally controlled water supply. This is the biggest infrastructure program in the City's history, and with construction on Phase 1 over 70% complete. Public Utilities staff and contractors are working closely with communities to minimize impacts as much as possible while large-scale construction continues in Morena, Bay Park, Clairemont, University City, Miramar and Scripps Ranch. San Diego historically relies on importing between 80% and 90% of its water supply from the Colorado River and Northern California. The cost of this imported water has increased nearly six-fold in the past 25 years and continues to rise. With limited local control over its water supply, San Diego is more vulnerable to droughts, climate change and natural disasters. Pure Water will be a safe, reliable and locally controlled water supply that will be essential to our quality of life in San Diego.



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/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 EPA Safe Drinking Water Hotline **(1-800-426-4791)**.

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 EPA Safe Drinking Water Hotline at 1-800-426-4791. For detailed information on drinking water regulations, visit the California Division of Drinking Water (DDW) website at: waterboards.ca.gov/drinking_water

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium and *Giardia* are microbial contaminants that are naturally present in the environment and found in surface water throughout the United States. Disinfection and filtration are highly effective in removing these contaminants; however, the disinfection and filtration methods cannot guarantee 100% removal. During calendar year 2024, the water supply to each of the City's water treatment plants was monitored for *Cryptosporidium* and *Giardia*, and neither was detected.

HOW TO READ THE TABLES

The tables on the following pages list parameters that DDW requires the City to monitor, which may be associated with primary (health), secondary (aesthetic) or no established standards. These tables summarize monitoring from January through December 2024. The tables list all parameters that were detected at or above DDW's Detection Limit for Purposes of Reporting (DLR). The map on page 2 of this report can be used to determine the treatment plant or plants that supply water to your residence. Less than 10% of San Diego's total water use comes from purchased treated water, which is a blend of water treated at the Metropolitan Water District's Skinner Water Treatment Plant, the San Diego County Water Authority's Twin Oaks Valley Water Treatment Plant and the Carlsbad Desalination Plant.



Definition of Terms:

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

DLR (Detection Limit for Reporting): The lowest level of a contaminant that a lab can reliably measure and report, ensuring accurate and consistent reporting of contaminant levels in water samples.

Location-based Running Annual Average (LRAA): The average of the most recent four quarters of monitoring performed at a distinct location in the distribution system. Location-based Running Annual Averages are calculated quarterly using 12 months of data and may include values obtained in 2023.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary Maximum Contaminant Levels are set as close to the Public Health Goals or Maximum Contaminant Level Goals as is economically and technologically feasible.

Secondary Maximum Contaminant Levels 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 health risk. Maximum Contaminant Level Goals are set by the U.S. Environmental Protection Agency.

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. Maximum Residual Disinfectant Level Goals do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MRL (Minimum Reporting Limit): The lowest concentration of a chemical that

a laboratory can reliably measure and report for a specific analytical method.

Notification Level (NL): Health-based advisory levels established by the Division of Drinking Water for chemicals in drinking water that lack Maximum Contaminant Levels. When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

Public Health Goal (PHG): The level of a contaminant in drinking water that does not pose a significant risk to health. Public Health Goals are not regulatory standards.

Primary Drinking Water Standard (PDWS): Maximum Contaminant Levels, Maximum Residual Disinfection Levels and treatment techniques for contaminants that affect health, along with their monitoring and reporting requirements.

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

Abbreviations

A: absent
CA SMCL: California Secondary Maximum Contaminant Level
CU: color units
DLR: detection limit for reporting
gr/Gal: grains per gallon
MDL: City of San Diego Water Quality Laboratory Method Detection Limit – the lowest quantifiable concentration of a measured parameter detectable by the laboratory.

mL: milliliter
n/a: not applicable
ND: not detected (less than DLR, where applicable)
NTU: nephelometric turbidity units
OU: odor units
pCi/L: picocuries per liter (a measure of radiation)
pH: potential of hydrogen. pH is a measure of how acidic or basic water is. The range

goes from 0 – 14, with 7 being neutral. pHs of less than 7 indicate acidity, whereas pHs greater than 7 are basic.
ppb: parts per billion or micrograms per liter (µg/L) – [1 ppb = 0.001 ppm]
ppm: parts per million or milligrams per liter (mg/L) – [1 ppm = 1,000 ppb]
µS/cm: micro-siemens/centimeter
< less than
> greater than

ENVIRONMENTAL MONITORING AND TECHNICAL SERVICES CONSUMER CONFIDENCE REPORT DATA - 2024

PRIMARY STANDARDS (Mandatory Health Related Standards)													
CHEMICAL PARAMETERS	UNITS	MCL	PHG	DLR	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY				
					AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	
Aluminum	ppm	1	0.6	0.05	ND	ND - ND	ND	ND - ND	ND	ND - ND	ND	ND - 0.2	Erosion of natural deposits; residue from some surface water treatment processes.
Barium	ppm	1	2	0.1	ND	ND - ND	0.1	ND - 0.1	ND	ND - ND	ND	ND - 0.1	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits.
Fluoride (naturally occurring)	ppm	2	1	0.1	0.2	0.2 - 0.3	0.3	0.2 - 0.3	0.3	0.2 - 0.4	0.5	0.2 - 0.9	Erosion of natural deposits
Fluoride (treatment-related) ^A	ppm	2	1	0.1	0.7	0.2 - 1.1	0.8	0.7 - 0.9	0.7	0.6 - 1.0	0.7	0.6 - 0.8	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate (as N)	ppm	10	10	0.4	ND	ND - 0.9	ND	ND - 1.1	ND	ND - 0.6	ND	ND - ND	Erosion of natural deposits; runoff and leaching from fertilizer use
^ Optimal Fluoride Level as established by US Dept. of Health and Human Services and the State Water Resources Control Board is 0.7 ppm.													

Primary standards (MCLs) are developed for the purpose of protecting the public from possible health risks associated with long-term exposure to contaminants. In this table there are six primary standards listed, which means that of the many primary standards set by DDW and the EPA, only these were detected at or above the DLR in San Diego's drinking water. These results are significantly below their respective MCLs. In general, no health hazard is expected to exist when contaminant levels are below a Primary MCL. A list of the parameters which were analyzed for, but not detected, in San Diego's drinking water is posted at sandiego.gov/public-utilities/water-quality/water-quality-reports.

California state law requires water agencies with more than 10,000 water service connections to supplement naturally-occurring fluoride in their drinking water. Our water system complies with this requirement to help prevent dental cavities in consumers. In 2024, the City of San Diego's source waters contained naturally-occurring fluoride between 0.2 and 0.4 ppm. State regulations require water producers to supplement this naturally-occurring fluoride to an optimum dose of 0.7 ppm. In 2024 treated water had fluoride concentrations ranging from 0.2 to 1.1 ppm, with an average value of 0.7 ppm. Information about fluoridation, oral health, and current issues is available at cdc.gov/fluoridation/index.html.

RADIOACTIVE PARAMETERS	UNITS	MCL	MCLG	DLR	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY				
					AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND	Single Sample	ND	Single Sample	ND	Single Sample	ND	ND - 4.0	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50 ^B	(0)	4	ND	Single Sample	5.0	Single Sample	4.5	Single Sample	ND	ND - 5.0	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	1	2.1	Single Sample	2.1	Single Sample	1.3	Single Sample	1.4	ND - 3.0	Erosion of natural deposits
^B The State Water Resources Control Board considers 50 pCi/L to be the level of concern for beta particles.													

As water travels over the surface of the land or in underground aquifers, it dissolves naturally-occurring minerals and, in some cases, radioactive material. Radioactive materials can be naturally-occurring or a result of oil and gas mining activities. The results in the table above are presented in units of picocuries per liter (pCi/L), a standard measurement that represents an amount of radiation per liter of water. San Diego's drinking water is substantially lower than the MCL for all radioactive parameters.

MICROBIOLOGICAL	UNITS	MCL	MCLG	DLR	CITY OF SAN DIEGO DISTRIBUTION SYSTEM		MAJOR SOURCES IN DRINKING WATER
					AVERAGE ^C	RANGE ^C	
Total Coliform Bacteria	% Positive	5% Positive	0	n/a	0.10%	0 - 0.34%	Naturally present in the environment
E. Coli (State Revised Total Coliform Rule)	Number	0	0	n/a	0	0	Human and animal fecal waste
^C Based on Monthly Percentages of Positive Total Coliform samples for a system collecting at least 40 samples per month.							

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2021. These revisions added the requirements of the federal Revised Total Coliform Rule, effective since April 1, 2016, to the existing state Total Coliform Rule. The revised rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. The state Revised Total Coliform Rule became effective July 1, 2021.

DDW regulations require the City to test a minimum of 330 samples per month throughout our distribution system for total coliform bacteria, and to report the results, including the percentage of total coliform positive samples in a given month. To meet this requirement, in 2024 the City of San Diego collected and analyzed 6951 total coliform samples from the distribution system, an average of 134 per week. The test also examines the presence of E. coli, which is a subgroup of total coliform. The MCL for E. coli is 0 positive samples and for total coliform is the presence of coliform in 5 percent or more of the samples analyzed in one month, meaning that if 100 samples are collected in March and five contain total coliform, a violation of the MCL has occurred. The regulations are written as a percentage of monthly samples because multiple variables can cause a positive result, including localized contamination at the tap. In 2024, the City did not exceed the monthly MCL for total coliform or E. coli. The maximum value recorded in 2024 was 0.34 percent of monthly samples. When any sample tests positive for total coliform or E. coli, additional samples associated with that site are collected and the cause of the positive result is investigated.

TURBIDITY	UNITS	MCL	PHG	DLR	CITY OF SAN DIEGO TREATMENT PLANTS			PURCHASED TREATED WATER	MAJOR SOURCES IN DRINKING WATER
					ALVARADO	MIRAMAR	OTAY		
					Max Level Found = 0.15	Max Level Found = 0.07	Max Level Found = 0.10	Max Level Found = 0.09	
Turbidity	NTU	TT = 1 NTU	n/a	n/a	100% of samples ≤ 0.3	100% of samples ≤ 0.3	100% of samples ≤ 0.3	100% of samples ≤ 0.3	Soil Runoff
		TT = 95% of samples ≤ 0.3 NTU							

Turbidity is a measure of the cloudiness of the water and is regulated as a Treatment Technique (TT) – an indicator of the effectiveness of our treatment. The City's three water treatment plants (WTPs) monitor turbidity every 15 minutes to ensure consistent, high-quality drinking water production for our customers. TT performance goals established by DDW state that all samples should have turbidity less than 1 NTU, and 95% of the samples should have turbidity less than 0.3 NTU. All three of our treatment plants had 100% of turbidity values less than 0.3 NTU; the maximum values measured in 2024 were 0.15 NTU for Alvarado WTP, 0.07 NTU for Miramar WTP and 0.10 for Otay WTP. These consistent and very low turbidity results have led to our treatment plants receiving performance awards. For example:

- The Otay WTP has been awarded the Director's Award from the American Water Works Association (AWWA) Partnership for Safe Water (PSW) Program for sixteen consecutive years.
- The Miramar WTP has received the Director's Award for eleven years and the President's Award for eleven consecutive years.
- The Alvarado WTP was awarded the Partnership for Safe Water Directors Award this year.

CONTINUED: PRIMARY STANDARDS *(Mandatory Health Related Standards)*

LEAD AND COPPER STUDY ^o	UNITS	ACTION LEVEL	PHG	DLR	SAMPLES TAKEN FROM CUSTOMER TAPS				NUMBER OF SCHOOLS SAMPLED FOR LEAD	MAJOR SOURCES IN DRINKING WATER
					90th PERCENTILE CONCENTRATION	SAMPLING SITES	NUMBER EXCEEDING AL	VIOLATION		
Copper	ppm	1.3	0.3	0.05	0.6	56	1	NO	281 ^E	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	5	ND	56	0	NO		Internal corrosion of household plumbing systems

In addition to the EPA Lead and Copper study and schools sampling, the City of San Diego analyzed 72 samples from our three drinking water treatment plants in 2024. All results were below the DLR.

^o Lead and Copper Rule Monitoring mandated every three years. Most recent monitoring conducted in 2023. E Represents total number of schools sampled in 2017, 2018, and 2019.

Lead is Non-Detectable in the water produced at San Diego's water treatment plants, and copper is well below the MCL. However, lead and copper can enter drinking water through plumbing materials used in homes or businesses. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage. In 1991, the EPA published the Lead and Copper Rule (LCR) which, along with corrosion control and other treatment practices, requires monitoring of lead and copper at customer taps. The purpose of the LCR residential sampling is to assess the potential of lead and copper to leach into drinking water from the plumbing installed between the water meter and the tap in homes and businesses. If 90th percentile lead concentrations at customer taps exceed an Action Level (AL) of 15 ppb or copper concentrations exceed an AL of 1.3 ppm in more than 10% of taps sampled, we are required to inform the public and undertake a number of additional actions to ensure comprehensive corrosion control.

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. The City of San Diego is responsible for providing high quality drinking water but cannot control the variety of materials used in home premise plumbing components. If you suspect that you may have elevated levels of lead in your drinking water, there are several steps you can take to reduce your risk. 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; Using cold water is recommended. You should also regularly clean your sink's aerators. Filters

are also available, but make sure that it is certified to remove lead and you replace it at the recommended intervals. 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 at 1-800-426-4791 or at <http://www.epa.gov/lead>.

According to current regulations, Lead and Copper Rule monitoring must be conducted every three years. In 2023, 56 customers provided samples from their taps to the City of San Diego for lead and copper analysis. None of the residences had a lead result above the AL, and only one residence had a copper level above the AL. Because less than 10% of our results were above the AL for both lead and copper, our water is considered non-corrosive, and no additional actions are required. Our next system-wide study will take place in 2026. Select eligible homes will be contacted for participation.

In 2017, DDW issued a Permit Amendment requiring water utilities to sample for lead in the drinking water of any school requesting testing. Additionally, Assembly Bill 746 was signed into law in October 2017, requiring California water providers to conduct lead testing at public K-12 schools within their service area to determine if lead is present in the school's private plumbing or water fixtures. The table lists the total number of schools the Public Utilities Department tested under these programs. To obtain testing results from individual schools, please contact the school directly or visit the district website.

Detected Disinfection Byproducts, Disinfectant Residual and Disinfection Byproduct Precursors

	UNITS	MCL	PHG	DLR	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER		MAJOR SOURCES IN DRINKING WATER
					ALVARADO		MIRAMAR		OTAY				
					AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	AVG.	RANGE	
Bromate ^F	ppb	10	0.1	5.0/1.0 ^H	ND	ND-9.4	ND	ND - ND	n/a	n/a	1.6	ND -8.5	Byproduct of drinking water disinfection using ozone
Chlorate ^G	ppb	NL=800 PPB		20	n/a	n/a	n/a	n/a	175	86.6 - 263	186	80.0 - 380	Byproduct of drinking water disinfection using chlorine dioxide
Chlorite ^G	ppm	1.0	0.05	0.020	n/a	n/a	n/a	n/a	0.42	0.034 - 0.65	n/a	n/a	Byproduct of drinking water disinfection using chlorine dioxide
Total Organic Carbon (TOC)	ppm	TT	n/a	0.3	3.1	2.5 - 4.5	2.6	2.4 - 2.9	4.5	2.1 - 6.1	2.4 ^I	2.0 - 3.0	Various natural and manmade sources; Precursor for the formation of disinfection byproducts

^F Required for Alvarado, Miramar, and Purchased Treated Water; compliance is determined by the quarterly Running Annual Average (RAA);

^G Required for Otay; ^H City of San Diego DLR= 5, Purchased Treated Water DLR = 1; ^I Highest Running Annual Average

	UNITS	MCL [MRDL]	PHG [MRDLG]	DLR (MDL)	CITY OF SAN DIEGO DISTRIBUTION SYSTEM			MAJOR SOURCES IN DRINKING WATER
Disinfectant Residual (Chloramines as Cl ₂)	ppm	[4.0] ^K	[4]	(0.1)	Distribution system average = 1.73	Range = ND - 3.80	n/a	Drinking water disinfectant added for treatment
Chlorite ^J	ppm	1.0	0.05	0.020	Distribution system average = 0.41	Range = 0.19 - 0.55	n/a	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5)	ppb	60 ^L	n/a	n/a	Maximum LRAA = 15	Range = ND - 23.7	Violation - NO	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM's)	ppb	80 ^L	n/a	n/a	Maximum LRAA = 49	Range = 8.2 - 64.1	Violation - NO	Byproduct of drinking water chlorination

^J Chlorite monitoring required only in the Southern section of the distribution system.

^K Compliance is determined by the distribution system average.

^L Total Trihalomethane and HAA5 compliance is based on quarterly Locational Running Annual Averages (LRAA).

Drinking water must be disinfected to ensure that any potentially harmful microbes are neutralized. There are a variety of disinfection strategies used throughout the United States. San Diego utilizes some of the more advanced disinfection technologies available. Our Alvarado and Miramar treatment plants use ozone and chloramines for disinfection. Ozone produces fewer disinfection byproducts than chlorine or chloramines alone and is considered a superior disinfection method. However, all disinfectant strategies have the potential to create a byproduct. When ozone is used, bromate is monitored as a disinfection byproduct. Compliance with EPA's Stage 2 Disinfection By-Product (DBP) rule is based on the running annual average at each location monitored in the treatment plant effluents. The MCL for bromate is a running annual average (RAA) of 10 ppb. In 2024, our highest RAA for bromate, which is calculated quarterly, was below the MCL and the individual sample results ranged from non-detect to 9.4 ppb. The City's Otay WTP uses chlorine dioxide and chloramines for disinfection. When chlorine dioxide is used, chlorite is monitored as a disinfection byproduct in the plant effluent and distribution system. All 2024 results for chlorite are below the MCLs. Total Organic Carbon (TOC) has no health effects. It is monitored and reported here because it provides an assessment of potential disinfection byproduct formation.

Another category of disinfection byproducts that the EPA and DDW regulate are Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5). Compliance with EPA's Stage 2 Disinfection By-Product (DBP) rule is based on the RAA at each location monitored in the distribution system. The MCL for TTHMs is a Locational Running Annual Average (LRAA) of 80 ppb, and the MCL for HAA5 is an LRAA of 60 ppb. In 2024, our highest LRAA for TTHM was 49 ppb, and individual measurements ranged from 8.2 - 64.1 ppb. For HAA5, our highest LRAA was 15 ppb, and individual measurements ranged from ND to 23.7 ppb. The City has had no violations of the EPA Stage 1 and Stage 2 DBP MCLs since the program was formalized in 2002.

As drinking water travels from the City's WTPs through the distribution system to homes and businesses, a disinfectant residual must be maintained in order to prevent growth of potentially harmful microbes. In San Diego, chloramines are used for this purpose. The City performs frequent and comprehensive monitoring to ensure that disinfectant levels remain in the proper range throughout our large and complex distribution system. The Maximum Residual Disinfectant Level (MRDL) is 4.0 ppm. In 2024 the City analyzed 7467 samples for chloramines throughout the distribution system; the average residual was 1.73 the maximum was 3.80 ppm.

SECONDARY STANDARDS (Aesthetics Standards)

	UNITS	CA SMCL	DLR (MDL)	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER		MAJOR SOURCES IN DRINKING WATER
				ALVARADO		MIRAMAR		OTAY		AVG.	RANGE	
				AVG.	RANGE	AVG.	RANGE	AVG.	RANGE			
Aluminum	ppm	0.2	0.05	ND	ND - ND	ND	ND - ND	ND	ND - ND	ND	ND - 0.2	Erosion of natural deposits; residue from some surface water treatment processes
Chloride	ppm	500	(0.5)	98.7	77.1 - 153	100	88.3 - 121	151	88.5 - 199	88.0 ^M	48.0 - 110 ^M	Runoff/leaching from natural deposits; seawater influence
Color	CU	15	(1)	ND	ND - 1	ND	ND - 1	2	ND - 4	ND	ND - 2	Naturally - occurring organic materials
Iron	ppb	300	(50)	ND	ND - ND	ND	ND - 61.5	ND	ND - ND	ND	ND - ND	Leaching from natural deposits
Manganese	ppb	50	(5)	6.1	ND - 12.1	ND	ND - 11.0	ND	ND - ND	ND	ND - ND	Leaching from natural deposits
Odor - Threshold	OU	3	1	ND	ND - 1	ND	ND - 1	ND	ND - 2	ND	ND - 1	Naturally - occurring organic materials
Specific Conductance	µS/cm @ 25°C	1600	n/a	790	633 - 898	856	701 - 926	980	758 - 1080	723	242 - 917	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	0.5	141	93.3 - 173	174	129 - 207	124	80.8 - 149	135	12.0 - 217	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	(10)	479	367 - 564	526	408 - 585	571	443 - 614	450	149 - 614	Runoff/leaching from natural deposits

^M Averaged from MWD Skinner Treatment Plant and Carlsbad Desalination Plant purchased water. Data for treated water purchased from SDCWA Twin Oaks Valley Treatment Plant not available for 2024.

Secondary standards (Secondary MCLs) are set to protect the odor, taste, and appearance of drinking water. If present at or above the Secondary MCL, these parameters may cause the water to appear cloudy or colored, cause staining of household plumbing fixtures, or to have a different or unusual taste or odor. These parameters are not considered to present a risk to human health at or above Secondary MCL levels. All measurements of Secondary Standards were at or below the Secondary MCL in 2024.

OTHER PARAMETERS THAT MAY BE OF INTEREST

	UNITS	MCL	PHG	MDL	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER	
					ALVARADO		MIRAMAR		OTAY		AVG.	RANGE
					AVG.	RANGE	AVG.	RANGE	AVG.	RANGE		
Sodium	ppm	n/a	n/a	1	78.6	56.5 - 89.6	86.5	69.6 - 98.3	109	78.4 - 125	75.0 ^M	54.6 - 95.0 ^M
Total Hardness	ppm	n/a	n/a	10	216	172 - 242	229	172 - 248	230	195 - 245	155 ^M	60.4 - 243 ^M
Total Hardness	gr/Gal	n/a	n/a	0.6	12.6	10.1 - 14.1	13.4	10.1 - 14.5	13.4	11.4 - 14.3	9.1 ^M	3.5 - 14.2 ^M
Alkalinity - Total as CaCO ₃	ppm	n/a	n/a	5	116	111 - 124	110	95.5 - 119	123	87.8 - 155	94.0	47.0 - 120
pH	SU	n/a	n/a	n/a	8.30	7.70 - 8.68	8.31	7.55 - 8.68	8.12	7.28 - 8.55	8.33	7.50 - 8.76

^M Averaged from MWD Skinner Treatment Plant and Carlsbad Desalination Plant purchased water. Data for treated water purchased from SDCWA Twin Oaks Valley Treatment Plant not available for 2024.

Water quality parameters that may be of interest to our consumers, but do not have MCLs or PHGs and are not considered to present a risk to human health, are included in the table above. Although sodium and hardness do not have MCLs, they are of interest to many consumers who are concerned about sodium intake and may believe that the hardness of the water could affect their health. Therefore, monitoring and reporting are required by DDW. Sodium refers to the salt present in the water and is generally naturally occurring. Hardness is the sum of positively-charged mineral ions present in the water, essentially the sum of magnesium and calcium. These minerals are usually naturally occurring. Alkalinity and pH are included here because they have proven to be of interest to our customers.

DETECTED UNREGULATED PARAMETERS

	UNITS	NOTIFICATION LEVEL	DLR (PHG)	CITY OF SAN DIEGO TREATMENT PLANTS						PURCHASED TREATED WATER	
				ALVARADO		MIRAMAR		OTAY		AVG.	RANGE
				AVG.	RANGE	AVG.	RANGE	AVG.	RANGE		
Boron	ppm	1	0.1	0.1	0.1 - 0.1	0.1	0.1 - 0.1	0.2	0.1 - 0.2	0.4	0.1 - 0.9
N-Nitrosodimethylamine (NDMA)	ppt	10	(3)	n/a	n/a	n/a	n/a	n/a	n/a	1.3	ND - 2.5
Chromium, hexavalent (CrVI)	ppb	n/a	(0.02)	n/a	n/a	n/a	n/a	n/a	n/a	ND	ND - 0.32

UCMR5 STUDY

UCMR5 PARAMETERS ^N	UNITS	UCMR4 MRL (MDL)	CITY OF SAN DIEGO TREATMENT PLANTS						CITY OF SAN DIEGO DISTRIBUTION SYSTEM	
			ALVARADO		MIRAMAR		OTAY		MAX LRAA	RANGE
			AVG.	RANGE	AVG.	RANGE	AVG.	RANGE		
Lithium	ppb	9	32.8	25.0 - 42.0	49.5	33.0 - 65.0	38.8	25.0 - 60.0	n/a	n/a

^N UCMR5 samples were collected in 2023.

The parameters listed in the Detected Unregulated Parameters section are not regulated by DDW or the EPA, and monitoring is not required. Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated. Boron and N-Nitrosodimethylamine (NDMA) have been issued Notification Levels (NL) by DDW. If detected above the NL, customers must be notified of the presence of these parameters. The results presented here are significantly lower than the NL. Hexavalent Chromium (CrVI) was issued an MCL of 10 ppb and a DLR of 0.1 ppb by DDW in October 2024. The MCL compliance date for our system will go into effect October 1, 2026. As part of the 1996 Safe Drinking Water Act (SDWA) amendments, every five years EPA selects from the Contaminant Candidate List (CCL) up to 30 unregulated contaminants to be monitored by public water systems as part of the Unregulated Contaminant Monitoring Rule (UCMR) program. The CCL is a list of contaminants that are not regulated but are known or anticipated to occur in public water systems and may warrant future regulation under the Safe Drinking Water Act. The results of UCMR studies provide a basis for future regulatory actions to protect public health. The City of San Diego conducted UCMR5 sampling in 2023.

In 2023, San Diego's drinking water was tested for 30 unregulated contaminants during the UCMR5 study. 29 per- and polyfluoroalkyl substances (PFAS) compounds were analyzed by the PUD Water Quality Laboratory, which received special approval by the EPA to conduct the UCMR5 PFAS analysis. Additionally, an EPA-approved contract laboratory conducted testing for lithium for the UCMR5 study. Of these 30 parameters, 29 were not detected above the EPA's UCMR5 minimum reporting level (MRL), and one was detected – lithium.

How to Get Involved:

Water quality policies are decided at San Diego City Council meetings at the City Administration Building, 202 C St., 12th floor. Calendar and agendas for City Council and committee meetings can be found at sandiego.gov/citywide-agendas-minutes.



This report contains important information about your drinking water. Please contact the City of San Diego Public Utilities Department at 619-515-3500 for assistance.

Farsi, Persian

تماس بگیرید این گزارش حاوی اطلاعات مهمی در مورد آب آشامیدنی شماست. برای دریافت اطلاعات بیشتر با City of San Diego Public Utilities Department, 619-515-3500.

French

Ce rapport contient des informations importantes concernant votre eau potable. Veuillez contacter City of San Diego Public Utilities Department à 619-515-3500 pour de plus amples informations en français.

Hmong

Tsab ntawv no muaj cov ntsiab lus tseem ceeb hais txog koj cov dej haus. Thov hu rau City of San Diego Public Utilities Department ntawm 619-515-3500 yog koj xav tau kev pab hais lus Hmoob.

Japanese

この報告書には上水道に関する重要な情報が記されています。ご質問等ございましたら、City of San Diego Public Utilities Department, 619-515-3500 まで日本語でご連絡下さい。

Korean

이 보고서는 당신의 식수에 관한 중요한 정보를 포함하고 있습니다. 한국어로 된 도움을 원하시면 City of San Diego Public Utilities Department, 619-515-3500 로 문의 하시기 바랍니다.

Mandarin (Simplified)

这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 City of San Diego Public Utilities Department 以获得中文的帮助: 619-515-3500.

Russian

Этот отчет содержит важную информацию о вашей питьевой воде. Пожалуйста, свяжитесь с City of San Diego Public Utilities Department по 619-515-3500 для получения помощи на русском языке.

Spanish

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse con City of San Diego Public Utilities Department al 619-515-3500 para asistirlo en español.

Tagalog

Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa City of San Diego Public Utilities Department o tumawag sa 619-515-3500 para matulungan sa wikang Tagalog.

Vietnamese

Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên lạc City of San Diego Public Utilities Department tại 619-515-3500 để được trợ giúp bằng tiếng Việt.

This information is available in alternative formats upon request.

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