



City of Merced Annual Consumer Confidence Report (CCR) 2024

The annual CCR, prepared in cooperation with the California State Water Resources Control Board—Division of Drinking Water, provides important information about Merced's water supply, water quality, and water delivery system. Test results for Merced's 2024 Water Quality Monitoring Program are summarized on the following pages. It is important to read the messages within this report regarding various water quality issues from the U.S. Environmental Protection Agency (US EPA) and from your City of Merced Water Division.

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

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

SOURCE WATER ASSESSMENT

An assessment of the drinking water source for the City of Merced's water system was completed in March 2003. The source is considered vulnerable from the following activities: gas stations (current and historic), dry cleaners, leaking underground storage tanks, sewer collection system, chemical/petroleum pipeline, fertilizer, pesticide/herbicide application, agricultural drainage, farm chemical distributor/application service, low density septic system, agricultural wells, and irrigation wells. A copy of the complete assessment is available at the City of Merced, Public Works Department at 1776 Grogan Avenue, Merced, CA. You may request a copy by calling (209) 385-6800.



CROSS-CONNECTION CONTROL PROGRAM

The purpose of the cross-connection control program is to reduce the hazards of contamination to the public water system by identifying actual and potential cross connections and acting to protect the system from these hazards. This is accomplished by installing approved backflow prevention assemblies where hazards are identified; or ensuring that water-using equipment on the premises is installed in accordance with plumbing code requirements and good practice. To keep your drinking water safe, the City's Cross-Connection specialist surveys the system to guarantee compliance with cross connection/backflow requirements. The City ensures that all primary external backflow prevention assemblies are tested annually. In 2024, there were 2,899 backflow assemblies tested throughout the service area of the City of Merced.

FLUORIDE IN YOUR WATER

Our water system is treated by adding fluoride to the naturally occurring level to help prevent tooth decay. State regulations require the fluoride levels in the treated water be at an optimum dose of 0.70ppm (parts per million). Our 2024 monitoring showed the fluoride levels in the treated water ranged from 0.11 ppm –0.92 ppm with an average of 0.69 ppm. Information about fluoridation and oral health, can be found at: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html.

WATER CONSERVATION WORKS!

Did you know that the average US household uses approximately 400 gallons of water per day or 100 gallons per person, per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference. Here are a few ideas:

- Use a water-efficient showerhead. They are inexpensive, easy to install and can save up to 750 gallons a month. And / or.....
- Shorter showers-a 5 minute shower uses 4-5 gallons of water compared to up to 50 gallons for a bath.
- Use a broom to sweep your driveway, garage, or sidewalk instead of using water.
- Make seasonal adjustments to your irrigation timers and check your timers after a power outage.
- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Run your clothes washer & dishwasher only when full and save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Fix leaking toilets and faucets - it's inexpensive and takes only a few minutes to replace.

LEAD IN HOME PLUMBING

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. We are 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 and want your water tested, call us for information at (209) 385-6800. For information on lead in drinking water, testing methods, and steps you can take to minimize exposure, call the Safe Drinking Water Hotline at (800) 426-4791 or visit:



WHERE DOES THE CITY OF MERCED GET IT'S WATER?

The City of Merced supplies water through the operation of 21 active wells throughout the City. These wells draw water from the Merced Groundwater Subbasin. Each site can produce over 1,500 gallons per minute. The distribution system is well over 500 miles long, includes over 25,000 service connections, nearly 3,000 fire hydrants and approximately 25,000 water meters, 7,000 main line valves and over 2,915 backflow devices. In 2024, these wells pumped 6.3 billion gallons of water to residents, businesses, and commercial properties.

The City of Merced is proud to report that we meet all United States Environmental Protection Agency (USEPA) drinking water standards for safety. City staff works diligently to supply a clean, reliable drinking water source while complying with emerging environmental issues and drinking water regulations. To ensure safety, our highly trained, certified treatment operators monitor our water treatment operations continuously. In 2024, we tested for more than 250 contaminants in the water and collected over 5,000 samples taken throughout our water system (results reported inside this report). If you have any questions about your drinking water or the contents of this report, please call the Water Division at (209) 385-6800.

LEAD SERVICE LINE COMPLIANCE

The Lead Service Line Inventory is a requirement under the Lead and Copper Rule Revisions (LCRR), which mandates water systems to prepare and maintain an inventory of service line materials. This inventory must categorize each service line as either lead, non-lead, galvanized requiring replacement, or lead status unknown. Water systems were required to submit their initial inventories to state agencies by October 16, 2024. The City of Merced met that requirement as well as the requirement to provide this inventory information to the public. You can find our Non Lead Statement on our website: www.cityofmerced.org/departments/public_works/water/Leadserviceline. For more detailed guidance, you can refer to www.epa.gov/ground-water-and-drinking-water.

EYEONWATER.COM IS FREE!

EyeOnWater is a **free** tool for City of Merced customers to view their water usage on their desktop or mobile device. EyeOnWater also detects leaks (and can send you alerts of the leak), can help customers understand their water consumption, and discover watering trends. Customers can sign up by visiting www.eyeonwater.com/signup.

For a copy of this report visit our website:

cityofmerced.org/PublicWorks/Water/ConsumerConfidenceReport

or call (209) 385-6800 to request a hard copy.

SUBSTANCES THAT COULD BE IN YOUR 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. In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resource Control Board (State Board/SWRCB) 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. 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 at (800) 426-4791.

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, some elderly and infants, may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The USEPA/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 Safe Drinking Water Hotline (800) 426-4791.

SAMPLING RESULTS The tables below list all drinking water contaminants that we tested for and detected according to State drinking water requirements. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless noted, the data presented in this report are from testing accomplished from January 1, 2024 to December 31, 2024. The State allows us to monitor for some contaminants ***less than*** once per year because the concentrations of these contaminants do not frequently change. Some of our data, though representative, are more than one year old. In these cases, the most recent sample data are included, along with the year in which the samples were collected. For questions regarding frequency of contaminant sampling, please call (209) 385-6800 or visit www.epa.gov.

REGULATED CONTAMINANTS WITH PRIMARY DRINKING WATER STANDARDS: Enforceable standards and treatment techniques to protect public health by limiting the levels of contaminants in drinking water.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AVERAGE DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic¹ (ug/L)	2022	10	0.004	3.39	ND - 7.7	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.
Barium (mg/L)	2022	1	2	0.23	0.12 - 0.47	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits.
Chlorine (mg/L)	2024	[4.0 (as Cl2)]	[4.0 (as Cl2)]	0.67	0.31 - 1.23	No	Drinking water disinfectant added for treatment.
Chromium [Total] (ug/L)	2022	50	(100)	0.23	ND - 4.8	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits.
Fluoride (mg/L)	2024	2	1	0.12	ND - 0.22	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Gross Alpha Particle Activity (pCi/L)	2022	15	(0)	2.17	ND - 9.3	No	Erosion of natural deposits.
Gross Beta Particle Activity (pCi/L)	2022	50	(0)	5.64	ND - 11	No	Decay of natural & man-made deposits.
Radium 228 (Ra 228) (pCi/L)	2022	5	0.019	0.1	ND - 2.1	No	Erosion of natural deposits.
Nitrate² (as N) (mg/L)	2024	10	10	2.83	1.3 - 5.0	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Tetrachloroethylene [PCE] ³ (ug/L)	2024	5	0.06	0.16	ND - 1.6	No	Discharge from factories, dry cleaners, and auto shops (metal degreaser).
Hexavalent Chromium (ug/L)	2024	10	0.02	3.53	0.8 - 4.7	No	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.
Uranium (pCi/L)	2022	20	0.43	2.00	ND - 8.7	No	Erosion of natural deposits.

REGULATED CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARDS: There are no PHGs, MCLGs, or mandatory standard health effects language for these contaminants because secondary MCLs are set on the basis of aesthetic concerns.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AVERAGE DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (mg/L)	2022	500	NS	8.73	4.0 - 15	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2022	15	NS	6.7	ND - 10	No	Naturally occurring organic materials
Copper (ug/L)	2022	1.0	NS	0.30	ND - 0.64	No	Internal corrosion of household plumbing systems; erosion of natural deposits
Foaming Agents (MBAS) (ug/L)	2022	500	NS	3	ND - 58	No	Municipal and industrial waste discharges
Corrosivity (Units)	2022	Non-corrosive	NS	12	10 - 13	No	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Odor—Threshold	2022	3 Units	NS	0.05	ND - 1.0	No	Naturally occurring organic materials
pH, Laboratory	2022	6.5 - 8.5	NS	8.0	7.5 - 8.2	No	Low pH: bitter metallic taste, corrosion. High pH: slippery feel, soda taste; deposits
Sulfate (mg/L)	2022	500	NS	9.1	5.5 - 12	No	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	2022	1600	NS	350	170 - 640	No	Substances that form ions when in water; seawater influence
Total Dissolved Solids (mg/L)	2022	1000	NS	255	170 - 400	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2022	5 Units	NS	0.23	ND - 1.3	No	Soil runoff

Tap water samples are collected for lead / copper analyses from households meeting criteria in city limits. The next Lead & Copper event is scheduled for Summer of 2027.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AVERAGE DETECTED 90TH %TILE	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (mg/L)	2024	1.3	0.3	0.17	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)	2024	15	0.2	ND	0/30	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

UNREGULATED AND OTHER SUBSTANCES⁶ No MCL, PHG or MCLG

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AVERAGE DETECTED	RANGE LOW-HIGH
Alkalinity, Bicarbonate (mg/L)	2022	143	66 - 290
Calcium (mg/L)	2022	28.5	15 - 60
Hardness (Total) as CaCO ₃ (mg/L)	2022	115.4	59 - 260
Magnesium (mg/L)	2022	10.7	4.3 - 27
Sodium (mg/L)	2022	23.7	13 - 36
PFOS Perfluorooctanesulfonic Acid ⁴ (ng/L)	2024	0.62	ND - 3.8
PFOA Perfluorooctanoic Acid ⁴ (ng/L)	2024	0.42	ND - 2.6
PFBS Perfluorobutanesulfonic Acid ⁴ (ng/L)	2024	0.10	ND - 2.2
PFHxA Perfluorohexanoic Acid ⁴ (ng/L)	2024	0.79	ND - 9.7
PFHxS Perfluorohexanesulfonic Acid ⁴ (ng/L)	2024	1.56	ND - 9.0
PFBA Perfluorobutanoic Acid ⁴ (ng/L)	2024	0.28	ND - 4.0
PFHpA Perfluoroheptanoic Acid ⁴ (ng/L)	2024	0.23	ND - 4.8
PFPeA Perfluoropentanoic Acid ⁴ (ng/L)	2024	0.78	ND - 14

- 1) Arsenic results at Well Site 2 for all three wells are within the blending MCL of 10 ppb. All other well sites were below the MCL. 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 cost of removing arsenic from drinking water. The U.S. EPA 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.
- 2) Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of 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 specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. ** Please note, all sampling results are averaged on 21 production wells**.
- 3) While your drinking water meets Federal and State standards, it may contain low levels of contaminants below detection limits and below the Regulatory Action Level. The PCE and TCE standard balances the current understanding of possible health effects against the cost of removing contaminants from the drinking water. The U.S. EPA continues to research the health effects of low levels of PCE and TCE. The were no TCE results over the Detection Limit (DLR) for 2024.
- 4) Unregulated contaminant monitoring and reporting (UCMR) helps the U.S. EPA and the State Water Board to determine where certain contaminants occur and whether the contaminants should be regulated. UCMR5 included two sample events to test for PFOS/PFOA and Lithium. The City of Merced’s 1st event was July 2023, the 2nd event took place January 2024. The average and range of samples from 2024 are included in this CCR (2023 average was reported in last years CCR). Also, there are thousands of different PFAS, some of which have been more widely used and studied than others. Scientific research suggests that exposure to certain PFAS may lead to adverse health outcomes. Research is still ongoing to determine how exposure to these different PFAS chemicals occurs and how they can affect human health.

Units of Measure and the equivalence :

To help you better understand the units of measure listed in these tables (ex: ug/L, ppb, mg/L) please see the Equivalence table below. If you have any questions, call the Water Department at (209) 385-6800. This table is provided by the State Water Board- Division of Drinking Water.

Units		Equivalence
mg/L - milligrams per liter	= ppm - parts per million	= 1 second in 11.5 days
ug/L - micrograms per liter	= ppb - parts per billion	= 1 second in nearly 32 years
ng/L - nanograms per liter	= ppt - parts per trillion	= 1 second in nearly 32,000 years

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 can 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; by-products of industrial processes and petroleum production, which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.

Radioactive Contaminants that can be naturally occurring or can be the result of oil and gas production and mining activities.

DEFINITIONS

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

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 MCLs (SMCLs) 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. EPA.

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 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.

ND (Not detected) Indicates that the substance was not found by laboratory analysis .

NL (Notification Level) Health-based advisory levels established for chemicals in drinking water that lack maximum contaminant levels.

NS No Standard.

NTU (Nephelometric Turbidity Units) Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter) A measure of radioactivity.

PHG (Public Health Goal) 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.

PDWS (Primary Drinking Water Standard) MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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

mg/L; ug/L; ng/L; ppm; ppb; ppt: listed above in the equivalence table.