



**City Of Merced
Consumer Confidence Report
Reporting Year 2021**

This Annual Consumer Confidence Report, 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 2021 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 ó 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.

WHAT DOES MY WATER METER LOOK LIKE?

Most residential properties have a 1” meter. The base rate includes 20 Hundred Cubic Feet (HCF) of water per month; which converts to 14,960 gallons. Most customers use less than this during non-irrigating months. While irrigation is essential for tree’s and gardens, lets continue being mindful of the current drought conditions we are in, and follow the watering schedule. You can find the schedule at www.cityofmerced.org



DRINKING WATER

FLUORIDATION

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 monitoring showed the fluoride levels in the treated water ranged from 0.46ppm - 0.90ppm with an average of 0.69ppm. Information about fluoridation, oral health, and current issues is available by visiting www.waterboards.ca.gov/drinking_water/certlic/

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 summary of the assessment by contacting the Administration Office at (209) 385-6800.

This report has been printed on recycled paper.

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 <http://www.epa.gov/lead>.

EYEONWATER.COM IS FREE!

Understanding your water use is an important part of conserving water. EyeOnWater is a free tool that allows City of Merced customers to connect to their water utility accounts and view their latest water usage on their desktop or mobile device. EyeOnWater helps customers understand their water usage, detect leaks, and discover their watering trends. Customers can sign up by visiting eyeonwater.com/signup.

CITY OF MERCED WEBSITE

The City of Merced continues to provide up to date information on council meetings, employment opportunities and the ability to pay your water bill online. Visit: www.cityofmerced.org for information on our parks, how to apply for a committee or to look up services from any of our Public Works departments.

CITY COUNCIL MEETINGS - Join us!

The City Council meets every first and third Monday of the month beginning at 6:00 pm at the Civic Center located at 678 W. 18th St., Merced. You can also watch it on your local channel. The public is encouraged to attend.



THE SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation’s public drinking water supply. SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. US EPA, States, and water agencies then work together to remain compliant with these standards. The National Primary Drinking Water Regulations set enforceable maximum contaminant levels for particular contaminants, required ways to treat water to remove contaminants as well as testing the water for those contaminants, and specific reporting requirements of the test results.

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

The City of Merced supplies water through the operation of 20 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 2,300 backflow devices. In 2021, these wells pumped 6.5 billion gallons of water to residents, businesses, and commercial properties.

HOW DOES OUR WATER COMPARE?

The City of Merced is proud to announce once again that your tap water met or surpassed all US EPA and State drinking water health standards. The City of Merced Water Department works around the clock to ensure the drinking water we deliver to our customers is of the highest quality. In an effort to meet Federal and State standards for drinking water, our highly trained, certified treatment operators monitor our water treatment operations continuously. In 2021, we tested for more than 100 contaminants in the water and collected over 3,000 samples taken throughout our water system. If you have any questions about your drinking water or the contents of this report, please call the Water Division at 385-6800.

SAMPLING STATIONS

Have you ever seen this green monument and wondered what the heck it is?

You will see them throughout Merced, at various locations next to the road. They are sampling stations connected to the water distribution system and are used to test and monitor the water quality just before arriving at your home or business.



Please call us at 209-385-6800 if you observe any tampering with these sampling stations.

For a copy of this report visit our website: cityofmerced.org/PublicWorks/Water/ConsumerConfidenceReport or call (209) 385-6800 and we will mail one to you.

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. In some cases, radioactive material 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. State Board regulations also establish limits for contaminants in bottled water that must 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 at (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, 2021 to December 31, 2021. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not frequently change. In these cases, the most recent sample data are included, along with the year in which the samples were collected.

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. The next Regulated contaminants sample event is scheduled for 2022.

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | PHG (MCLG) [MRDLG] | AVERAGE DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|---|-----------------|-----------------------------|-----------------------------|---------------------|-------------------|-----------|--|
| Arsenic ¹ (ug/L) | 2019 / 2020 | 10 | 0.004 | 3.9 | 2.1 - 8.1 | No | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Barium (mg/L) | 2019 | 1 | 2 | 0.23 | 0.13 - 0.48 | No | Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits |
| Chlorine (mg/L) | 2021 | [4.0 (as Cl ₂)] | [4.0 (as Cl ₂)] | 0.71 | 0.10 - .98 | No | Drinking water disinfectant added for treatment |
| Chromium [Total] (ug/L) | 2019 | 50 | (100) | 0.44 | ND - 4.8 | No | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Fluoride (mg/L) | 2021 | 2 | 1 | 0.07 | ND - 0.18 | No | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Particle Activity (pCi/L) | 2017 | 15 | (0) | 2.4 | ND - 12 | No | Erosion of natural deposits |
| Gross Beta Particle Activity ² (pCi/L) | 2017 | 50 | (0) | 6.1 | ND - 11 | No | Decay of natural and man-made deposits |
| Nitrate ³ (as N) (mg/L) | 2021 | 10 | 10 | 2.41 | 0.93 - 4.8 | No | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Tetrachloroethylene [PCE] ⁴ (ug/L) | 2021 | 5 | 0.06 | 0.04 | ND - 1.6 | No | Discharge from factories, dry cleaners, and auto shops (metal degreaser) |
| Trichloroethylene [TCE] (ug/L) | 2021 | 5 | 1.7 | 0.04 | ND - 0.71 | No | Discharge from metal degreasing sites and other factories |
| Total Trihalomethanes [TTHM] (ug/L) | 2021 | 80 | N/A | 0.6 | ND - 2.4 | No | Byproduct of drinking water disinfection |
| Uranium (pCi/L) | 2017 | 20 | 0.43 | 2.4 | ND - 8.7 | No | Erosion of natural deposits |

REGULATED CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARDS: Non-enforceable guidelines regarding contaminants that may cause cosmetic or aesthetic effects. *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) | 2019 | 500 | NS | 8.6 | 4.5 - 14 | No | Runoff/leaching from natural deposits; seawater influence |
| Color (Units) | 2019 | 15 | NS | 0.26 | ND - 5 | No | Naturally occurring organic materials |
| Corrosivity ⁵ (Units) | 2019 | Non-corrosive | NS | 11.8 | 11 - 12 | No | Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors |
| Manganese (ug/L) | 2019 | 50 | NS | 0.13 | ND - 2.5 | No | Leaching from natural deposits |
| Odor—Threshold | 2019 / 2020 | 3 Units | NS | 0.11 | ND - 1.0 | No | Naturally occurring organic materials |
| pH, Laboratory | 2019 | 6.5 - 8.5 | NS | 7.8 | 7.5 - 8.1 | No | Low pH: bitter metallic taste, corrosion. High pH: slippery feel, soda taste; deposits |
| Sulfate (mg/L) | 2019 | 500 | NS | 9.2 | 5.9 - 12 | No | Runoff/leaching from natural deposits; industrial wastes |
| Specific Conductance (µS/cm) | 2019 | 1600 | NS | 349 | 220 - 580 | No | Substances that form ions when in water; seawater influence |
| Total Dissolved Solids (mg/L) | 2019 | 1,000 | NS | 258 | 190 - 380 | No | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 2019 | 5 Units | NS | 0.12 | 0.10 - 0.86 | No | Soil runoff |

Tap water samples were collected for lead and copper analyses from households meeting criteria within city limits. The next Lead & Copper event is scheduled in 2024.

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | PHG (MCLG) | AVERAGE DETECTED 90TH %TILE | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE |
|--------------------------------|-----------------|-----|---------------|-----------------------------------|-----------------------------------|-----------|---|
| Copper (mg/L) | 2021 | 1.3 | 0.3 | 0.16 | 0/31 | No | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ug/L) | 2021 | 15 | 0.2 | ND | 0/31 | 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—Total as CaCO ₃ | 2019 | 148 | 83 - 300 |
| Bromide (ppb) | 2018 | 70 | 24 - 170 |
| Calcium (ppm) | 2019 | 29.7 | 17 - 57 |
| Hardness (Total) as CaCO ₃ (ppm) | 2019 | 126 | 63 - 260 |
| Hexavalent Chromium (ppb) | 2017 | 3.5 | 1.6 - 4.7 |
| Magnesium (ppm) | 2019/ 2020 | 11.6 | 4.6 - 24 |
| Molybdenum (ppb) | 2016 | 1.5 | ND - 2.9 |
| *Perfluorooctanoic Acid (PFOA) (ng/L) | 2019 | 0.11 | ND - 1.6 |
| *Perfluorooctanesulfonic Acid (PFOS) (ng/L) | 2019 | 0.14 | ND - 1.3 |
| Potassium (ppm) | 2019 | 6.8 | 3.3 - 12 |
| Sodium (ppm) | 2019 | 24 | 14 - 35 |
| Toluidine (ppb) | 2018 | 0.0019 | ND - .034 |

Units of Measure and the equivalence :

To help you better understand the units of measure listed with substances and results (ex: ppm, ppb) please see the 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** (Regulatory Action Level): 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.
- 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.

*For questions regarding frequency of contaminant sampling, please call (209) 385-6800 or visit www.epa.gov.

- 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) 50 pCi/L is used as a screening level for Gross Beta Particle Activity.
- 3) 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.
- 4) 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.
- 5) Corrosivity is not a National Environmental Laboratory Accreditation Program accredited analyte. All sampling results are based and calculated on an average of 20 production wells.
- 6) Unregulated contaminant monitoring helps the U.S. EPA and the State Water Board to determine where certain contaminants occur and whether the contaminants need to be regulated.
*The July 2018 notification levels for PFOA of 14 ng/L and for PFOS of 13 ng/L were superseded on August 22, 2019, with new notification levels of 5.1 ng/L for PFOA and 6.5 ng/L for PFOS.