



2018 ANNUAL WATER QUALITY REPORT

MEADOWBROOK | PWS ID: 2410008



CALIFORNIA
AMERICAN WATER

WE KEEP LIFE FLOWING™



RICHARD SVINDLAND
President

A Message from California American Water President RICHARD SVINDLAND

Dear California American Water Customer,

Having easy access to safe, clean water is something that can be easily taken for granted. At California American Water, our top priority is providing safe, reliable drinking water to our more than 690,000 customers.

I am pleased to share with you our 2018 Consumer Confidence Report, which is a testament to the hard work and dedication of our employees who ensure high-quality drinking water.

QUALITY: We have rigorous safeguards in place to ensure the water we provide to you meets or surpasses increasingly stringent water quality standards. Across California, we conducted approximately 652 different tests on 25,239 water samples for 2,994 constituents last year. **We are proud and pleased to confirm that we met every primary and secondary state and federal water quality standard.**

SERVICE: Last year, we invested more than \$74 million in water infrastructure in the California communities we serve. This investment ensures and maintains the safety and reliability of the facilities and technology needed to draw, treat, and distribute water.

VALUE: While costs to provide water service continue to increase across the country, our investments help us provide high-quality water service that remains an exceptional value, costing customers about a penny per gallon.

We are proud to continue to supply water that meets or surpasses all state and federal water quality standards. If you have any questions or concerns, you can contact us by phone, email, online at www.californiaamwater.com, or in person at our local Customer Center. Please take the time to review this report. It provides details about the source and quality of your drinking water, using data from water-quality testing conducted for your local system between January and December 2018.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard Svindland".

RICHARD SVINDLAND
President

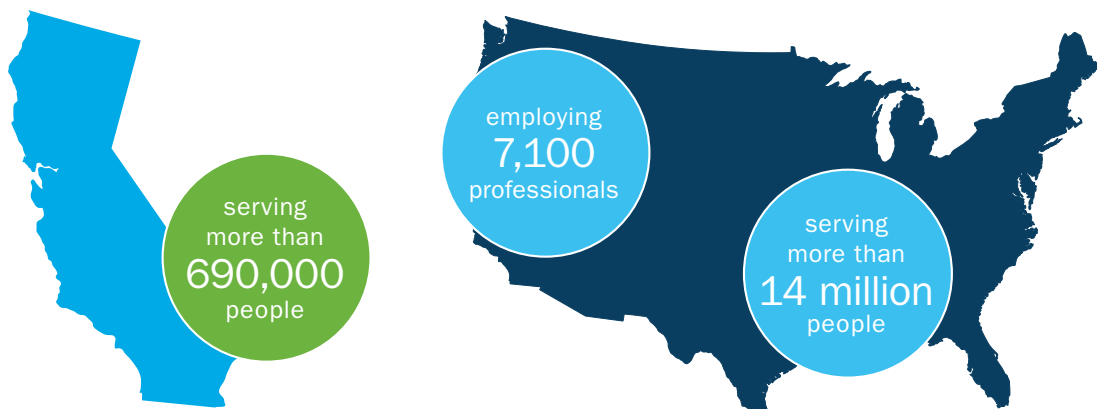


OUR COMMITMENT TO QUALITY

Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). This CCR covers compliance testing completed through December 2018. We are pleased to tell you that our compliance with state and federal drinking water regulations remains exemplary. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.

ABOUT CALIFORNIA AMERICAN WATER (CAW) AND AMERICAN WATER (AW)

California American Water, a subsidiary of American Water (NYSE: AWK), provides high-quality and reliable water and/or wastewater services to more than 690,000 people. With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to more than 14 million people in 46 states and Ontario, Canada. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn.



A woman with short dark hair, wearing a light blue button-down shirt, is looking down at a tablet computer she is holding. The background is a bright, sunlit outdoor setting with trees and a hill in the distance.

WHAT IS A CONSUMER CONFIDENCE REPORT?

The Consumer Confidence Report (CCR) is an annual water quality report containing data that California American Water and all associated water purveyors collected during the past year. CCRs let consumers know what contaminants, if any, are in their drinking water as well as any related health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

In 2018, we collected numerous samples at various sampling points in your water system. The water quality data presented is a combination of data compiled from our nationally recognized water quality laboratory and local commercial laboratories; all certified in drinking water testing by the State Board's Division of Drinking Water. If you have any questions about this report or your drinking water, please contact our Customer Service Center at (888) 237-1333.



ABOUT YOUR WATER

The Meadowbrook water system is served by wells that pump groundwater from aquifers in the area. All of these wells are located within the geographic area of our Meadowbrook service area. The water supplied is chlorinated to ensure that it meets bacteriological quality standards. The water supply is distributed for residential and commercial use.

NOTICE OF SOURCE WATER ASSESSMENT (SWA)

The source water assessment for all three active wells was completed by the CDPH Merced District with Well No. 4 completed in August 2001, Well No. 5 in April 2003 and Well No. 6 in June 2010. The sources are considered most vulnerable to the following (although not associated with any detected chemicals): chemical/petroleum processing/storage, known contaminant plumes, septic systems (high-density/>1 per acre), underground injection of commercial/industrial discharges, grazing (>5 large animals or equivalent per acre), historic gas stations, transportation corridors (road right-of-ways/herbicide use areas), dredging, and agricultural drainage and lagoons/liquid wastes.



WHAT ARE THE SOURCES OF CONTAMINANTS?

The sources of drinking 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 can pick up substances resulting from animal or human activity and even radioactive material. In order to ensure that tap water is safe to drink, USEPA and the State Water Resources Control Board set regulations limiting the amount of certain contaminants in water provided by public water systems. Contaminants that may be present in source water include:

ORGANIC CHEMICAL CONTAMINANTS

including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

INORGANIC CONTAMINANTS,

such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

PESTICIDES AND HERBICIDES,

which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.

MICROBIAL CONTAMINANTS,

such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

RADIOACTIVE CONTAMINANTS,

which can be naturally occurring or may be the result of oil and gas production and mining activities.



FLUORIDE, NITRATES, URANIUM

FLUORIDE

Fluoride is a naturally occurring substance. It can be present in drinking water from two sources:

1. **By nature** when groundwater comes into contact with fluoride-containing minerals naturally present in the earth; or
2. **By a water purveyor** through addition of fluoride to the water they are providing in the distribution system.

In the Meadowbrook system, all fluoride in the water is from naturally occurring minerals and the concentrations are well below the limits for contaminants in drinking water set by the USEPA and State Water Resources Control Board, Division of Drinking Water.

NITRATES

Nitrates 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 certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

URANIUM

Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer. A major source of uranium in drinking water is the erosion of natural deposits.



LEAD

LEAD

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. California American Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking.

If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/lead.

TESTING LEAD IN PUBLIC SCHOOLS

To safeguard water quality in California's K-12 public schools, California Assembly Bill 746 requires community water systems to test lead levels, by July 1, 2019, in drinking water at all California public, K-12 school sites that were constructed before January 1, 2010. California American Water serves 2 public school sites (Merced City School District) in the Meadowbrook water system and has completed the testing at all sites. California law makes school districts responsible for informing parents of lead testing results for their schools. Please contact your child's school or school district to get detailed results on lead testing at your child's school.

A background image of a smiling woman with long dark hair, wearing a red jacket, holding a blue water bottle. The image is partially obscured by a blue banner with white text.

EDUCATIONAL & SPECIAL HEALTH INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

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 for infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by microbial contaminants are available through the USEPA's Safe Drinking Water Hotline at (800) 426-4791.



MEASUREMENTS

Water is sampled and tested consistently throughout the year to ensure the best possible quality. Contaminants are measured in:

- **Parts per million (ppm) or milligrams per liter (mg/L)**
- **Parts per billion (ppb) or micrograms per liter ($\mu\text{g/L}$)**
- **Parts per trillion (ppt) or nanograms per liter (ng/L)**
- **Grains per gallon (grains/gal)** – A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.
- **MicroSiemens per centimeter ($\mu\text{S/cm}$)** – A measurement of a solution's ability to conduct electricity.
- **Nephelometric Turbidity Units (NTU)** – A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- **PicoCuries per liter (pCi/L)** – A measurement of radioactivity in water.

PARTS PER MILLION:

1 second
in 12 days

PARTS PER BILLION:

1 second
in 32 years

PARTS PER TRILLION:

1 second
in 32,000 years

1 second

12
days

1 second

32
years

1 second

32,000
years



HOW TO READ THIS TABLE

California American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2018, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting this table, see the “Definition of Terms” section.

- ① Starting with a **Substance**, read across.
- ② **Year Sampled** is usually in 2018 or year prior.
- ③ **MCL** shows the highest level of substance (contaminant) allowed.
- ④ **MCLG** is the goal level for that substance (this may be lower than what is allowed).
- ⑤ **Average Amount Detected** represents the measured amount (less is better).
- ⑥ **Range** tells the highest and lowest amounts measured.
- ⑦ A **No** under **Violation** indicates government requirements were met.
- ⑧ **Major Sources in Drinking Water** tells where the substance usually originates.

Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

Water Quality Results

Regulated Substances

Substance (Units)	Year Sampled	MCL	PHG (MCLG)	Average Amount Detected	Range		Violation	Major Sources In Drinking Water
					Low	High		
Atrazine (ppb)	2017-2018	1	0.15	ND	ND	0.70	No	Runoff from herbicide used on row crops and along railroad and highway right-of-ways
Barium (ppm)	2017	1	2	0.35	0.30	0.40	No	Discharges of oil drilling wastes and from metal refineries; Erosion of natural deposits
Fluoride (ppm) (naturally occurring)	2017	2	1	ND	ND	0.10	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Gross Alpha particle activity (pCi/L)	2017 - 2018	15	0	6.3	ND	10.6	No	Erosion of natural deposits
Nitrate as N (ppm)	2018	10	10	5.2	3.2	6.5	No	Runoff and leaching from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits
Uranium (pCi/L)	2018	20	0	10.0	NA		No	Runoff and leaching from fertilizer use; Leaching from septic tanks and sewage; Erosion of natural deposits

Distribution System Monitoring

Chlorine (ppm)	2018	MRDL=4.0	MRDLG=4.0	0.69	0.21	1.3	No	Treatment chemical used to disinfect drinking water
Haloacetic Acids (ppb) ¹	2018	60	N/A	1.3	ND	1.3	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) ¹	2018	80	N/A	ND	ND		No	By-product of drinking water disinfection

¹The "Average Amount Detected" is the Highest Running Annual Average.

Secondary Substances

Substance (Units)	Year Sampled	SMCL ²	Average Amount Detected	Range		Violation	Major Sources In Drinking Water
				Low	High		
Chloride (ppm)	2017-2018	500	23	4.7	29	No	Runoff/leaching from natural deposits
Iron (ppb)	2017	300	115	ND	230	No	Leaching from natural deposits; Industrial wastes
Specific Conductance (mmhos/cm)	2017-2018	1600	592	480	680	No	Substances that form ions when in water; Seawater influence
Sulfate (ppm)	2017-2018	500	17	9.0	19	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2017-2018	1000	388	300	430	No	Runoff/leaching from natural deposits; Industrial wastes
Turbidity (NTU)	2017-2018	5	0.3	0.1	0.5	No	Soil runoff
Vanadium ³ (ppb)	2017	50 ⁴	16	NA		No	

² Secondary MCLs are set to protect the odor, taste, and appearance of drinking water. These contaminants are not considered to present a risk to human health at the SMCL.

³ The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

⁴ Notification Level, not a secondary MCL.

Lead and Copper (tap water samples)

Substance (Units)	Year Sampled	Action Level	PHG (MCLG)	Number of Samples	Amount Detected (90th Percentile)	Homes Above Action Level	Violation	Major Sources In Drinking Water
Copper (ppm)	2016	1.3	0.3	20	0.26	0	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2016	15	0.2	20	ND	0	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Discharges from industrial manufacturers

Additional Water Quality Parameters of Interest

This table shows average levels of additional water quality parameters that are often of interest to consumers. The averages shown are calculated from the levels detected at each source used to supply water is 2018. Values may vary from day-to-day. There are no health-based limits for these substance in drinking water.

Substance (Units)	Year Sampled	Average Amount Detected	Range	
			Low	High
Bicarbonate Alkalinity (ppm)	2017-2018	304	280	360
Alkalinity as CaCO ₃ (ppm)	2017-2018	280	240	300
Calcium (ppm)	2017-2018	59	47	70
Magnesium (ppm)	2017	23	17	29
pH	2017-2018	7.4	7.1	7.7
Sodium (ppm)	2017	30	29	32
Total Hardness as CaCO ₃ (ppm)	2017-2018	252	190	290
Total Hardness as CaCO ₃ (grains/gallon)	2017-2018	15	11	17

"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.

"Sodium" refers to the salt present in the water and is generally naturally occurring.



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.

DDW: Division of Drinking Water

LRAA: Locational Running Annual Average

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Secondary MCLs (SMCL) are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL: Million fibers per liter.

micromhos per centimeter ($\mu\text{mhos/cm}$): A measure of electrical conductance.

NA: Not applicable

N/A: No data available

ND: Not detected

Nephelometric Turbidity Units (NTU): Measurement of the clarity, or turbidity, of the water.

Notification Level (NL): The concentration of a contaminant, which, if exceeded, requires notification to

DDW and the consumer. Not an enforceable standard.

pH: A measurement of acidity, 7.0 being neutral.

picocuries per liter (pCi/L): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

parts per billion (ppb): One part substance per billion parts water, or micrograms per liter.

parts per million (ppm): One part substance per million parts water, or milligrams per liter.

parts per trillion (ppt): One part substance per trillion parts water, or nanograms per liter.

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

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

RAA: Running Annual Average

Secondary Maximum Contaminant Level (SMCL): Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

SWRCB: State Water Resources Control Board

TON: Threshold Odor Number

Total Dissolved Solids (TDS): An overall indicator of the amount of minerals in water.

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

Variances and Exemptions: State or USEPA permission not to meet an MCL or utilize a treatment technique under certain conditions.

%: Percent



HOW TO CONTACT US

If you have any questions about this report, your drinking water, or service, please call California American Water's Customer Service toll free at (888) 237-1333.

WATER INFORMATION SOURCES

California American Water

www.californiaamwater.com

State Water Resources Control Board

www.swrcb.ca.gov

United States Environmental Protection Agency (USEPA)

www.epa.gov/safewater

Safe Drinking Water Hotline

(800) 426-4791

Centers for Disease Control and Prevention

www.cdc.gov

American Water Works Association

www.awwa.org

Water Quality Association

www.wqa.org

National Library of Medicine/National Institute of Health

www.nlm.nih.gov/medlineplus/drinkingwater.html

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at (888) 237-1333.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al (888) 237-1333.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm (888) 237-1333.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電(888) 237-1333 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया (888) 237-1333 पर हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону (888) 237-1333.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyang kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa (888) 237-1333.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số (888) 237-1333.