

# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2018



*Presented By*  
**Ramona Municipal  
Water District**

## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

## Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## 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 U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 or <http://water.epa.gov/drink/hotline>.



## Substances That Could Be in 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 Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The 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.

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, which are by-products of industrial processes and petroleum production, and 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.

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.

## What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (back pressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (back siphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

“ We remain vigilant in delivering the best-quality drinking water ”

## 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 we 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 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## Where Does My Water Come From?

The San Diego County Water Authority purchases water from the Metropolitan Water District of Southern California (MWD). This water is a blend of surface water from the Colorado River and runoff from the Northern California Sierra Nevada Mountains. It is treated at the Twin Oaks Valley Treatment Plant located in San Diego County and the MWD Lake Skinner Filtration Plant located in Riverside County. The Carlsbad Desalination Plant provides San Diego County with a locally controlled, drought-proof supply of high-quality water. The Ramona Municipal Water District purchases water from the City of Poway periodically.

## Public Meetings

You are invited to attend our district board meetings. We meet the second Tuesday of each month at 2 p.m. at the Ramona Community Center, 434 Aqua Lane, Ramona.

Board of Directors:

- Jim Robinson, President, Division IV
- Jim Hickle, Vice President, Division II
- Bryan Wadlington, Secretary, Division V
- Thomas Ace, Treasurer, Division III
- Jeff Lawler, Director, Division I
- David Barnum, General Manager



## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Sarah Yorba, Water Quality Lab Analyst, at (760) 789-1330.



## Protecting Your Water

**B**acteria are a natural and important part of our world. There are around 40 trillion bacteria living in each of us; without them, we would not be able to live healthy lives. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern, however, because it indicates that the water may be contaminated with other organisms that can cause disease.

In 2016 the U.S. EPA passed a new regulation called the Revised Total Coliform Rule, which requires additional steps that water systems must take in order to ensure the integrity of the drinking water distribution system by monitoring for the presence of bacteria like total coliform and *E. coli*. The rule requires more stringent standards than the previous regulation, and it requires water systems that may be vulnerable to contamination to have in place procedures that will minimize the incidence of contamination. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment of their system and correct any problems quickly. The U.S. EPA anticipates greater public health protection under the new regulation due to its more preventive approach to identifying and fixing problems that may affect public health.

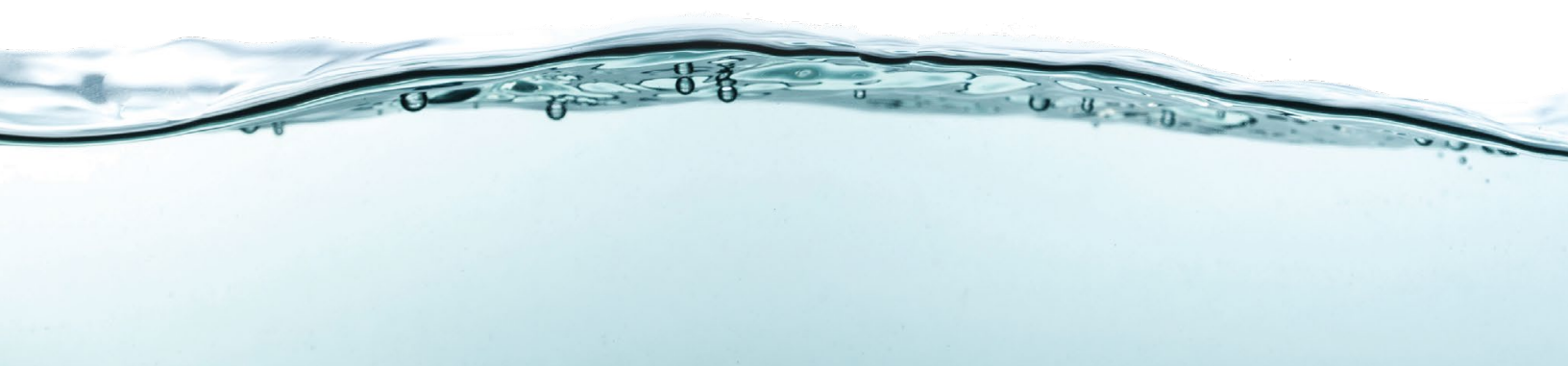
Though we have been fortunate to have the highest-quality drinking water, our goal is to eliminate all potential pathways of contamination into our distribution system, and this new rule helps us to accomplish that goal.

## Source Water Assessment

**T**he Colorado River Watershed Sanitary Survey 2015 Update was completed in December 2016.

The California State Water Project Watershed Sanitary Survey 2016 Update was completed in June 2017.

State Water Project supplies are considered to be most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting the Metropolitan Water District at (213) 217-6000.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES											
				Ramona Municipal Water District		Metropolitan Water District Skinner Plant		San Diego County Water Authority			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Arsenic</b> (ppb)	2018	10	0.004	NA	NA	ND	NA	3.0 <sup>1</sup>	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Barium</b> (ppm)	2018	1	2	NA	NA	ND	NA	ND <sup>1</sup>	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Bromate</b> (ppb)	2018	10	0.1	NA	NA	3.7	ND–5.9	5.0	1.0–15.0	No	By-product of drinking water disinfection
<b>Chloramines</b> (ppm)	2018	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	2.07	0.20–3.26	NA	NA	NA	NA	No	Drinking water disinfectant added for treatment
<b>Fluoride</b> <sup>3</sup> (ppm)	2018	2.0	1	NA	NA	0.7	0.6–0.9	0.7	0.6–0.9	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Gross Alpha Particle Activity</b> (pCi/L)	2018	15	(0)	NA	NA	ND	ND–4	5	4–7	No	Erosion of natural deposits
<b>Gross Beta Particle Activity</b> <sup>2</sup> (pCi/L)	2018	50	(0)	NA	NA	ND	ND–5	5	4–6	No	Decay of natural and man-made deposits
<b>Haloacetic Acids</b> (ppb)	2018	60	NA	4.83	2.1–9.8	NA	NA	NA	NA	No	By-product of drinking water disinfection
<b>Heterotrophic Plate Count Bacteria</b> (Units)	2018	Surface water treatment = TT	HPC = NA; Others = (0)	0.96	ND–233	NA	NA	NA	NA	No	Naturally present in the environment
<b>Hexavalent Chromium</b> (ppb)	2018	NS <sup>5</sup>	0.02	NA	NA	NA	NA	0.09	0.04–0.17	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
<b>Nitrate [as nitrogen]</b> (ppm)	2018	10	10	NA	NA	NA	NA	0.4	ND–0.6	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2018	80	NA	23.5	16.0–29.0	NA	NA	NA	NA	No	By-product of drinking water disinfection
<b>Turbidity</b> (NTU)	2018	TT	NA	NA	NA	0.08	ND–0.08	0.02	0.01–0.02	No	Soil runoff
<b>Uranium</b> (pCi/L)	2018	20	0.43	NA	NA	ND	ND–3	2.2 <sup>1</sup>	NA	No	Erosion of natural deposits

**REGULATED SUBSTANCES**

				Carlsbad Desalination Plant		City of Poway			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Arsenic</b> (ppb)	2018	10	0.004	ND	NA	NA	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Barium</b> (ppm)	2018	1	2	ND	NA	NA	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Bromate</b> (ppb)	2018	10	0.1	NA	NA	NA	NA	No	By-product of drinking water disinfection
<b>Chloramines</b> (ppm)	2018	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	NA	NA	NA	NA	No	Drinking water disinfectant added for treatment
<b>Fluoride</b> <sup>3</sup> (ppm)	2018	2.0	1	0.72	0.60–0.83	NA	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Gross Alpha Particle Activity</b> (pCi/L)	2018	15	(0)	ND	NA	NA	NA	No	Erosion of natural deposits
<b>Gross Beta Particle Activity</b> <sup>4</sup> (pCi/L)	2018	50	(0)	ND	NA	NA	NA	No	Decay of natural and man-made deposits
<b>Haloacetic Acids</b> (ppb)	2018	60	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection
<b>Heterotrophic Plate Count Bacteria</b> (Units)	2018	Surface water treatment = TT	HPC = NA; Others = (0)	NA	NA	NA	NA	No	Naturally present in the environment
<b>Hexavalent Chromium</b> (ppb)	2018	NS <sup>5</sup>	0.02	NA	NA	NA	NA	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
<b>Nitrate [as nitrogen]</b> (ppm)	2018	10	10	NA	NA	NA	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2018	80	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection
<b>Turbidity</b> (NTU)	2018	TT	NA	NA	NA	0.10	NA	No	Soil runoff
<b>Uranium</b> (pCi/L)	2018	20	0.43	ND	NA	NA	NA	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2016	1.3	0.3	0.15	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> (ppb)	2016	15	0.2	ND	0/30	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

## SECONDARY SUBSTANCES

				Ramona Municipal Water District		Metropolitan Water District Skinner Plant		San Diego County Water Authority		Carlsbad Desalination Plant		City of Poway			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chloride</b> (ppm)	2018	500	NS	NA	NA	92	90–93	90 <sup>1</sup>	NA	73.7	55.2–118	NA	NA	No	Runoff/leaching from natural deposits; seawater influence
<b>Color</b> (Units)	2018	15	NS	NA	NA	ND	ND–1	NA	NA	NA	NA	NA	NA	No	Naturally occurring organic materials
<b>Odor–Threshold</b> (Units)	2018	3	NS	NA	NA	3	3–3	NA	NA	NA	NA	NA	NA	No	Naturally occurring organic materials
<b>Specific Conductance</b> (µS/cm)	2018	1,600	NS	NA	NA	846	841–851	810 <sup>1</sup>	NA	418.40	304.00–599.79	NA	NA	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2018	500	NS	NA	NA	172	168–175	160 <sup>1</sup>	NA	12.2	8.5–17.2	NA	NA	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2018	1,000	NS	NA	NA	518	510–526	510 <sup>1</sup>	NA	217	119–333	NA	NA	No	Runoff/leaching from natural deposits

## OTHER UNREGULATED SUBSTANCES <sup>6</sup>

		Ramona Municipal Water District		Metropolitan Water District Skinner Plant		San Diego County Water Authority		Carlsbad Desalination Plant		City of Poway	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
<b>Alkalinity</b> (ppm)	2018	NA	NA	106	104–109	110 <sup>1</sup>	NA	63.4	42–80	NA	NA
<b>Boron</b> (ppb)	2018	NA	NA	120	NA	130 <sup>1</sup>	NA	0.606	0.372–0.923	NA	NA
<b>Calcium</b> (ppm)	2018	NA	NA	56	54–58	55 <sup>1</sup>	NA	22.8	17.36–34.96	NA	NA
<b>Chlorate</b> (ppb)	2018	NA	NA	NA	NA	219	160–290	NA	NA	NA	NA
<b>Corrosivity [as aggressiveness]</b> (Units)	2018	NA	NA	12.4	12.3–12.4	12 <sup>1</sup>	NA	12.09	11.56–12.33	NA	NA
<b>Corrosivity [as Saturation]</b> (Units)	2018	NA	NA	0.56	0.54–0.59	0.64 <sup>1</sup>	NA	0.29	0.05–0.53	NA	NA
<b>Hardness</b> (ppm)	2018	NA	NA	228	218–238	220 <sup>1</sup>	NA	54	42.2–70.9	NA	NA
<b>Magnesium</b> (ppm)	2018	NA	NA	22	21–22	20 <sup>1</sup>	NA	0.685	0.464–1.100	NA	NA
<b>N-Nitrosodimethylamine [NDMA]</b> (ppt)	2018	NA	NA	4.1	NA	NA	NA	NA	NA	NA	NA
<b>Potassium</b> (ppm)	2018	NA	NA	4.2	4.0–4.5	4.0 <sup>1</sup>	NA	2.44	1.04–3.70	NA	NA
<b>Sodium</b> (ppm)	2018	NA	NA	88	85–92	82 <sup>1</sup>	NA	54.2	16.2–78.4	NA	NA
<b>Total Organic Carbon</b> (ppm)	2018	NA	NA	2.4	2.0–2.7	2.3	2.1–2.6	NA	NA	NA	NA

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**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.

**NA:** Not applicable.

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

**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.

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

**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 EPA.

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

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

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

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

<sup>1</sup>Single sample taken.

<sup>2</sup>Sampled in 2018.

<sup>3</sup>This water system treats your water by adding fluoride to the naturally occurring level to help prevent dental caries in consumers. State regulations require the fluoride levels in the treated water be maintained within a range of 0.6 to 1.2 ppm, with an optimal dose of 0.7 ppm. Information about fluoridation, oral health, and current issues is available from [http://www.swrcb.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

<sup>4</sup>The State Water Resources Control Board considers 50 pCi/L to be the level of concern for beta particles.

<sup>5</sup>There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

<sup>6</sup>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.