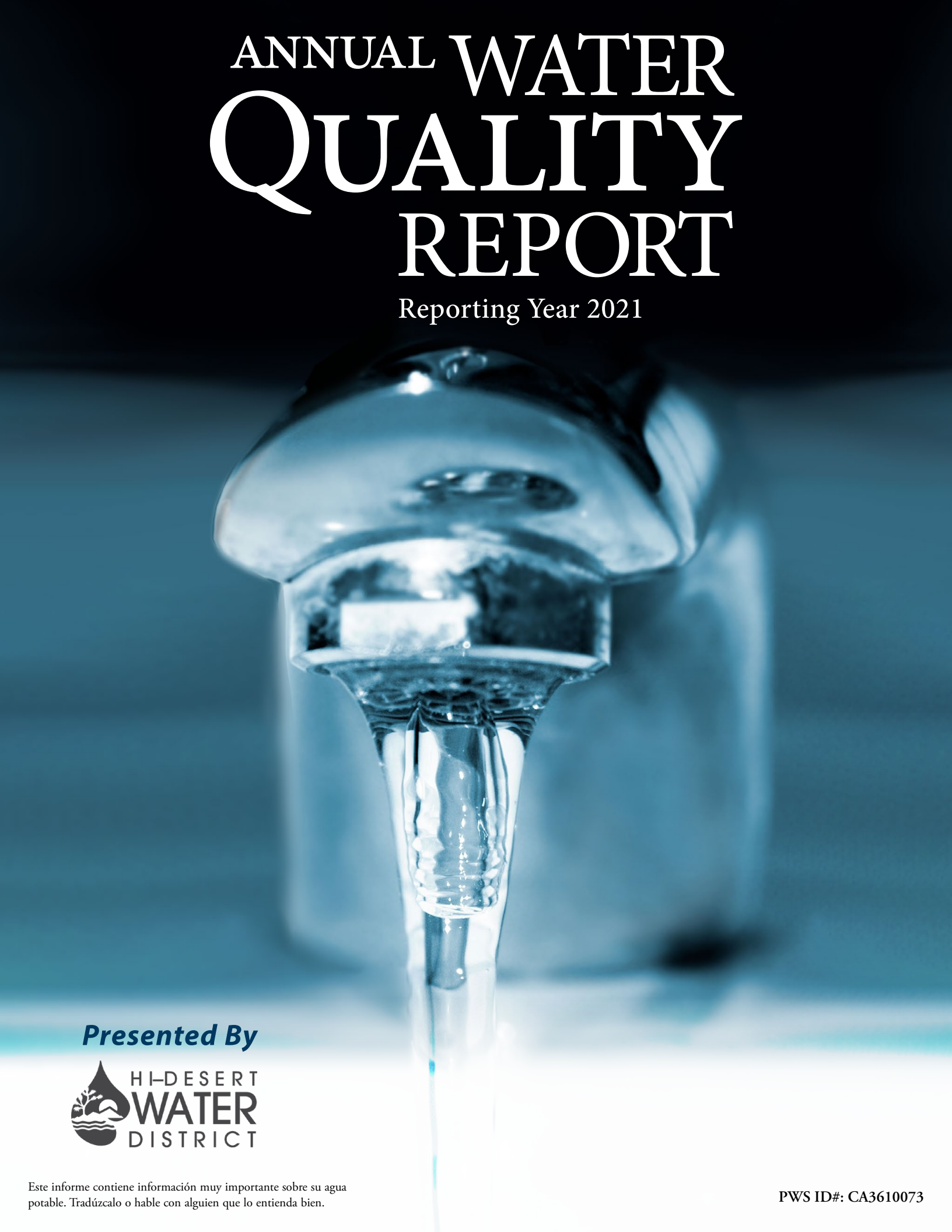
ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By

HI-DESERT WATER DISTRICT

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

PWS ID#: CA3610073

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Milky Water

It's not uncommon to see a glass of water looking cloudy - after a few seconds, it clears up. The cloudiness is caused by tiny air bubbles in the water and, like any air, it'll work its way back to the top of the water, returning to the atmosphere. Cloudy or milky water is completely harmless. Just let it sit for a minute or two, and it will clear up.

Where Does My Water Come From?

The Warren Basin, which is located in the heart of Yucca Valley, is the main source of our drinking water. It runs west to east; the Ames Basin is located in the northern part of the district. To maintain both a healthy groundwater basin and water levels in the Warren Basin, the district has been importing water through the State Water Project via Mojave Water Agency into three recharge locations: Sites 3, 6, and 7. In 2021 the district extracted approximately 2,923 acre-feet, with a daily average demand of 8 acre-feet, from the two aquifers and was able to recharge approximately 2,221 acre-feet into the Warren Basin from the State Water Project (1 acre-foot = 325,851 gallons).

The district's distribution system serves approximately 25,842 residents with 10,941 service connections. It covers over 300 miles of piping and is served by 11 active groundwater wells supplying a total of 6,600 gallons per minute. Sixteen water storage reservoirs feed 18 pressure zones with a total storage capacity of 13.34 million gallons to the active service connections serving the Town of Yucca Valley and unincorporated areas of San Bernardino County known as the Mesa.

Infrastructure Repair and Improvements

The district's continued commitment to supplying its customers safe drinking water requires ongoing improvements within the distribution system. Water mains, water tanks, wells, pressure-regulating stations, booster stations, and equipment are all part of the system that we upgrade and maintain throughout the district. In 2020 the district completed its scheduled tank maintenance program, which involved inspection, rehabilitation, and restoration of tanks throughout the district. Last year, tank inspections began again and will continue moving forward. HDWD's Capital Replacement Program crew installed over 12,500 feet of new water main.

Sewer System Update

Septic systems within the Warren Basin have the highest potential of contaminants that can affect the groundwater. Septage can infiltrate the groundwater supply, causing nitrate contamination in excess of maximum contaminant levels (MCL). Nitrates in excess of the MCL can cause a condition known as methemoglobinemia, also referred to as blue baby syndrome. The new sewer collection system will help reduce nitrate levels.

HDWD began the installation of its sewer collection system in January 2017. The project reached substantial completion in March 2020. Over approximately three years, more than 76 miles of 6- to 21-inch-diameter sewer collection system pipes were installed, along with related appurtenances (manholes, laterals, etc.). HDWD also completed over 76 miles of roadway repair and restoration throughout the Town of Yucca Valley. HDWD's Wastewater Reclamation Facility was constructed over an 18-month period. Substantial completion was reached in fall 2019, and the facility began receiving local effluent in November 2019. It began discharging clean water into its percolation ponds in February 2020. This work will reduce the total number of septic systems, which in turn will help remove the threat of nitrate infiltration to the aquifer.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 water.epa.gov/drink/hotline.

Source Water Assessment

The Source Water Assessment Plan (SWAP) is available for review at HDWD. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our water source. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the basin's susceptibility to contamination by the identified potential sources. HDWD's SWAP was completed in December 2002, with newer wells added later.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please feel free to contact Marty Stockstell, Water Quality Technician, at (760) 365-8333, ext. 6276.

Treatment Train Description

The district continuously chlorinates the water supply year round. The chlorine is made on-site into a sodium hypochlorite solution below 1 percent and injected into the distribution system at 1 part per million (ppm), with a goal of at least 0.2 ppm at the end of the distribution system. HDWD has a few wells that extract water from the deeper portions of our aquifer, which have exceeded the state's MCL for arsenic and nitrate. Water from these wells may require treatment before being pumped into the distribution system for consumption. The district currently treats one active well, Well 16 E, for arsenic and nitrates by utilizing an approved treatment technique known as blending. In this process, the well water with high concentrations of arsenic and nitrate is blended with water from two other wells with lower concentrations. The district monitors the delivered water weekly and reports all the results on a monthly basis to the State Board.

Community Participation

You are invited to attend Hi-Desert Water District's (HDWD) Board of Directors' meetings in person or via Zoom. These meetings are regularly scheduled on the first and third Wednesday of the month at 4:00 p.m. Board meetings are held at the district's administration office, located at 55439 29 Palms Highway, Yucca Valley. Information on regularly scheduled meetings is available online at hdwd.com or by calling the district secretary at (760) 228-6285 or emailing the information desk at info@hdwd.com. (In the event of COVID-19 restrictions, in-person attendance may be suspended.)

Your Board of Directors
Sheldon Hough, President
Scot McKone, Vice President
Bob Stadum, Director
Roger Mayes, Director
Sue Tsuda, Director

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 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 at (800) 426-4791 or epa.gov/safewater/lead.

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

School Lead Sampling

In 2017 six schools within the district's boundaries requested lead sampling. Five different sampling locations per school were tested.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only 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. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

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

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2021	10	0.004	1.6	ND–5.7	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2021	[4.0 (as Cl2)]	[4 (as Cl2)]	0.77	ND–1.25	No	Drinking water disinfectant added for treatment
Chromium, Total (ppb)	2021	50	(100)	2.05	ND–5.5	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2021	2.0	1	0.276	0.19–0.57	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2021	15	(0)	8.026	1.7–14.1	No	Erosion of natural deposits
Nitrate [as nitrogen] (ppm)	2021	10	10	2.49	0.73–4.3	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 226 (pCi/L)	2021	5	0.05	0.095	0.095–0.095	No	Erosion of natural deposits
Radium 228 (pCi/L)	2021	5	0.019	1	1–1	No	Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	7.1	4.2–10	No	By-product of drinking water disinfection
Uranium (pCi/L)	2021	20	0.43	7.43	3.08–10.6	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
Copper (ppm)	2020	1.3	0.3	0.15	0/34	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2020	15	0.2	ND	0/34	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2021	500	NS	47.75	16–74	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2021	300	NS	40	ND–320	No	Leaching from natural deposits; industrial wastes
Specific Conductance (µmho/cm)	2021	1,600	NS	427.5	280–510	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2021	500	NS	33.125	13–45	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2021	1,000	NS	255.22	170–340	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2021	5	NS	0.10	ND–1.80	No	Soil runoff

UNREGULATED SUBSTANCES [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
1,4-Dioxane (ppb)	2014	0.014	ND–0.19	Stabilizer or solvent in manufacturing
Bicarbonate (ppm)	2021	101.25	82–180	Naturally occurring
Bromide (ppb)	2020	183.45	79–310	NA
Bromochloroacetic Acid (ppb)	2020	0.64	0.33–1.2	NA
Calcium (ppm)	2021	37.375	22–47	Naturally occurring
Chlorate (ppb)	2014	33.19	ND–100	Defoliant or desiccant; disinfection by-product
Chlorodibromoacetic Acid (ppb)	2020	0.17	ND–0.37	NA
Chromium VI [hexavalent chromium] [2] (ppb)	2014	1.48	ND–4.7	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Dibromoacetic Acid (ppb)	2020	0.87	0.35–1.9	NA
Dichloroacetic Acid (ppb)	2020	0.19	ND–0.56	NA
Magnesium (ppm)	2021	5.85	1.4–9	Naturally occurring
Manganese (ppb)	2020	0.45	ND–1.4	NA
Molybdenum (ppb)	2014	4.6	1.2–24	Naturally occurring
Monobromoacetic Acid (ppb)	2020	0.14	ND–0.56	NA
pH (units)	2021	8.02	7.6–8.3	Naturally occurring
Sodium (ppm)	2021	38.375	33–52	Naturally occurring salt content in water
Potassium (ppm)	2021	1.38	ND–2.1	Naturally occurring
Strontium (ppb)	2014	280.47	150–360	Naturally occurring
Total Alkalinity (ppm)	2021	101.25	82–180	Naturally occurring
Total Hardness (ppm)	2021	116.875	67–150	Naturally occurring
Vanadium (ppb)	2014	3.62	1.5–5.6	Naturally occurring

[1] Unregulated contaminant monitoring helps the U.S. EPA and the State Board determine where certain contaminants occur and whether the contaminants need to be regulated.

[2] There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

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 that, 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.

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).

µmho/cm (micromhos per centimeter): A unit expressing the amount of electrical conductivity of a solution.