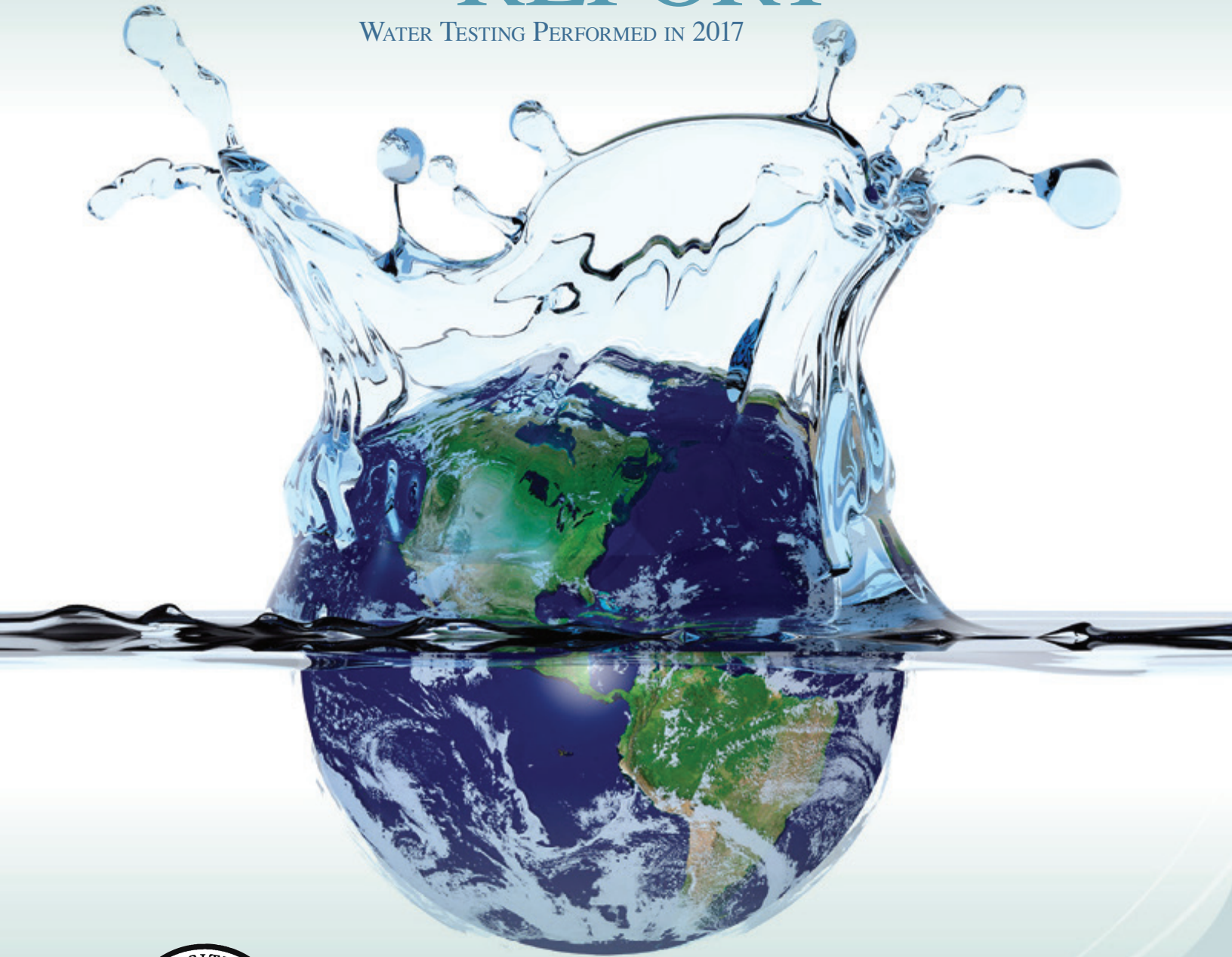


# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



*Presented By*  
**City of Sonoma**

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

PWS ID#: 4910012

## Quality First

Once again, we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users.

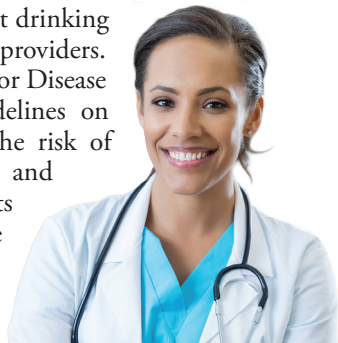
During the October 2017 firestorm, City staff continuously monitored the water system. No facilities were damaged, and adequate water pressure remained throughout the system. Also, the water quality was not compromised during or after the fires.

We encourage you to share your thoughts with us on the information contained in this report. Thank you for allowing us the opportunity to serve you and your family.

## Important Health Information

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 costs 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.

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 <http://water.epa.gov/drink/hotline>.



Water treatment is a complex, time-consuming process.

## 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 may 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.

## Where Does My Water Come From?

The City of Sonoma water customers are fortunate because we enjoy a safe, reliable water supply from two sources. The City's primary source is water purchased from the Sonoma County Water Agency (SCWA). SCWA's source of supply is five Ranney Collectors (or caissons) located in the gravels adjacent to the Russian River, seven production wells, and to a minor degree, three wells in the Santa Rosa plain. The river originates in central Mendocino County, approximately 15 miles north of the City of Ukiah. The main channel of the Russian River is approximately 110 miles long. It flows southward from its headwaters near Potter Valley to the Pacific Ocean near Jenner, about 20 miles west of the City of Santa Rosa.

Our secondary water source consists of six City groundwater wells, which are capable of producing a combined total of approximately 1.5 million gallons of water a day. The City of Sonoma uses these wells as a supplementary supply. The wells are ready for production when there is a need to augment SCWA deliveries during periods of high use, typically during the hot summer months, and for other water-related emergencies that can develop. Well 5 is permitted as a standby well, well 7 is not permitted and is offline.

In 2017, City of Sonoma Water Division purchased 602 million gallons of water from the SCWA, and, in addition, the City produced 48 million gallons from its groundwater wells during the months of January through September. Once the water has been purchased or produced, it enters the City's distribution system, which includes more than 58 miles of water main, 4,387 service connections, five storage tanks and two pumping stations.

In order to provide a high level of customer service, our water utility personnel monitor water levels in the City's storage tanks, operate City wells, sample its wells and distribution system for laboratory analysis, install new service connections and meters, read customers' meters for billing, and maintain and repair the water system as needed. We thank you for your continued efforts to help us continue our water efficiency efforts. This year we will be asking our customers to use water wisely, especially during hot summer months, and to use the conservation resources available to our residents.

### Source Water Assessment

In 2004, the City conducted a thorough Source Water Assessment of the City's municipal groundwater wells. According to the assessments, all sites are in compliance with federal safe drinking water guidelines. A complete copy of the Source Water Assessment may be viewed at City Hall, #1 The Plaza, Sonoma, CA.

## Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The City Council typically meets the first and third Mondays of each month beginning at 6 p.m. at the Council Chambers, located at 177 First St. West, Sonoma, CA. For further information about City Council meetings, please visit [www.sonomacity.org](http://www.sonomacity.org) or call City Hall at (707) 938-3681.

### QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Steve MacCarthy, Water Operations Supervisor, at (707) 933-2231 or email at [smacCarthy@sonomacity.org](mailto:smacCarthy@sonomacity.org).







## BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S.

**34**  
BILLION

**1**  
MILLION The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

**135**  
BILLION

**300**  
MILLION The number of Americans who receive water from a public water system.

The age in years of the world's oldest water found in a mine at a depth of nearly two miles.

**2**  
BILLION

**151**  
THOUSAND The number of active public water systems in the U.S.

The number of highly trained and licensed water professionals serving in the U.S.

**199**  
THOUSAND

## 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 or at [www.epa.gov/lead](http://www.epa.gov/lead).



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily 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 often 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.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. In 2018, we will be collecting samples for UCMR4. Contact us for more information on this program.

Please note: (Wells 1,3,4 and 6 sampled in 2017. Well 2 sampled in 2016. Well 8 sampled in 2015. Well 5 sampled in 2011) Although *E. coli* was detected, the water system is not in violation of the *E. coli* MCL. Wells 2 and 6 were not supplying water to the system when *E. coli* was detected.

### REGULATED SUBSTANCES

				City of Sonoma		SCWA			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2017	10	0.004	7.0	4.4–8.4	ND	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	2017	2.0	1	0.3	0.19–0.5	ND	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2016	15	(0)	2.78 <sup>1</sup>	1.47–3 <sup>1</sup>	0.3 <sup>2</sup>	ND–1.36 <sup>2</sup>	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2017	60	NA	4.65	3.8–5.5	4.99	ND–9.14	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2017	45	45	0.63	ND–2.1	ND <sup>3</sup>	NA <sup>3</sup>	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	33.5	26–41	13	10–17	No	By-product of drinking water disinfection

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%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.11	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	8.4	0/30	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

### SECONDARY SUBSTANCES

				City of Sonoma		SCWA			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2017	500	NS	8.6	6.3–12	7.0	4.7–19	No	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µS/cm)	2017	1,600	NS	216	180–280	249	230–280	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2017	500	NS	6.37	2.9–13	12	6–16	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2017	1,000	NS	211	180–260	153	140–160	No	Runoff/leaching from natural deposits
Turbidity (Units)	2017	5	NS	5.9	ND–38	0.038	ND–0.055	No	Soil runoff
Zinc (ppm)	2017	5.0	NS	0.088	ND–0.22	ND	NA	No	Runoff/leaching from natural deposits; industrial wastes

## OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	City of Sonoma		SCWA	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2017	108	89–124	129	120–150
Calcium (ppm)	2017	9.4	3.9–14	20.8	15–25
Magnesium (ppm)	2017	5.6	1.2–9	12.8	6.8–17
pH (Units)	2017	7.4	7.2–8.1	7.26	7.15–7.4
Sodium (ppm)	2017	26	18–44	11.3	7.5–30
Total Hardness (ppm)	2017	46.5	14–72	104	66–132

## UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) - CITY OF SONOMA <sup>4</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chlorate (ppb)	2014	9.4	ND–43
Chromium (ppb)	2014	0.41	ND–0.66
Chromium VI [Hexavalent Chromium] (ppb)	2014	0.56	ND–0.94
Molybdenum (ppb)	2014	1.91	ND–2.8
Strontium (ppb)	2014	75	26–200
Vanadium (ppb)	2014	12.6	ND–24

<sup>1</sup> Wells 1, 3, 4, 5, 6, and 8 were sampled in 2016. Well 2 was sampled in 2013.

<sup>2</sup> Sampled in 2014.

<sup>3</sup> Sampled in 2016.

<sup>4</sup> Unregulated contaminant monitoring helps the U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

## Definitions

**AL (Regulatory Action Level):** The concentration of a contaminant that, 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

**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).