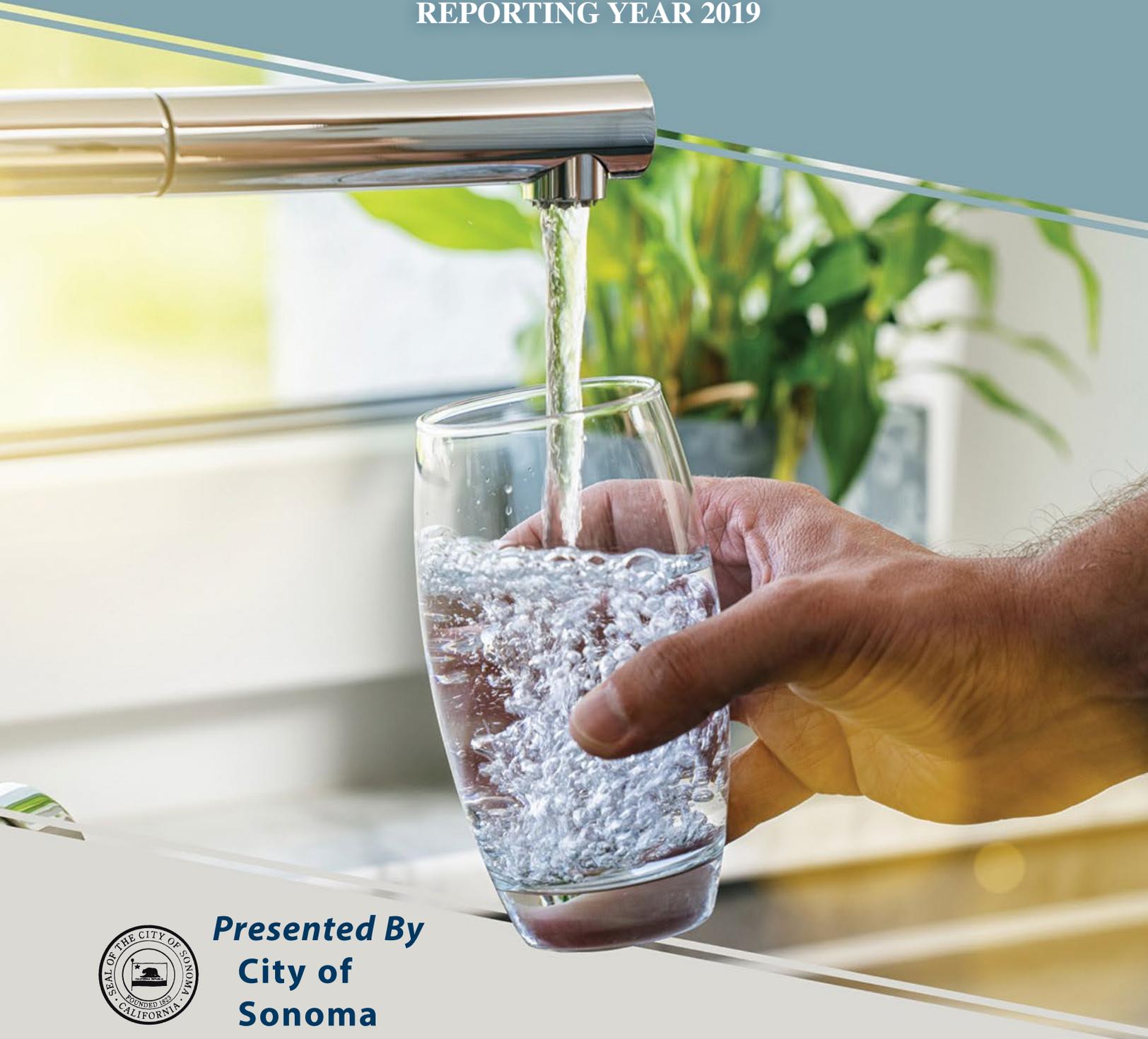


# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



***Presented By***  
**City of  
Sonoma**

## Our Mission Continues

City of Sonoma Water staff is once again pleased to present our annual Water Quality Report covering all testing performed between January 1 and December 31, 2019. 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 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.



## 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 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>.



## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The City Council normally meets on the first and third Mondays of each month, beginning at 6:00 p.m. For more information about City Council meetings, please visit [www.sonomacity.org](http://www.sonomacity.org) or call City Hall at (707) 938-3681.

## 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).

## Source Water Assessment

In 2004 the City conducted a source water assessment and in 2018 Sonoma Water conducted their source water assessment of their 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.

## QUESTIONS?

For more information about this report, or for any questions related to your drinking water, please call Jesse Mazza, Water Operations Supervisor, at (707) 933-2231, or e-mail at [jmazza@sonomacity.org](mailto:jmazza@sonomacity.org).

## Water Main Flushing

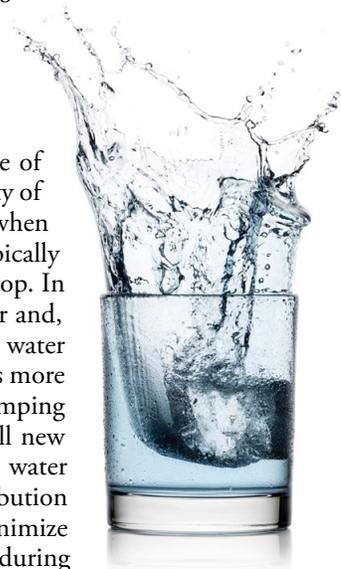
Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains. Flushing maintains water quality in many ways. For example, flushing removes sediments that can affect the taste, clarity, and color of the water. Additionally, sediments can reduce the disinfective power of chlorine. The City's flushing program helps to ensure the presence of fresh water with sufficient dissolved oxygen, and disinfectant levels.

To aid in water conservation, the City of Sonoma is using a Neutral Output Discharge Elimination System (NO-DES) where possible. The NO-DES flushing method is an environmentally friendly alternative to conventional water main flushing. Instead of water flowing out of fire hydrants and running to waste, the NO-DES process uses a trailer or truck-mounted pumping, filtering, and chlorination system that continuously circulates the water within the targeted area of water distribution main. The NO-DES unit is connected with large hoses between two selected fire hydrants, creating a temporary loop in the water distribution system. Operators use AWWA (American Water Works Association) prescribed velocities, passing the water through a series of filter bags to remove all sediment and particulate. Tests are taken throughout the operations to ensure the best possible water quality is delivered to our residents and businesses.

## Where Does My Water Come From?

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 Sonoma Water. Sonoma Water'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, from three wells in the Santa Rosa plain. The Russian 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 and 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 Sonoma Water deliveries during periods of high use, typically during the hot summer months, and for other water-related emergencies that can develop. In 2019, the City of Sonoma purchased 583 million gallons of water from Sonoma Water and, in addition, the City produced 86 million gallons from its groundwater wells. Once the water has been purchased or produced, it enters the City's distribution system, which includes more than 58 miles of water main, 4,405 service connections, five storage tanks, and two pumping stations. We monitor water levels in the City's storage tanks, operate City wells, install new service connections and meters, read meters for billing, and maintain and repair the water system as needed. In 2019, we took over 250 samples from City wells, tanks, and distribution system for laboratory analysis. We thank our community for its continued efforts to minimize water use. This year, we will be asking our community to use water wisely, especially during hot summer months, and to utilize the conservation resources available to our residents.



## 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.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES									
			City of Sonoma			Sonoma Water			
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)	2019	10	0.004	6.43	4.3–7.8	2	2–2	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Fluoride</b> (ppm)	2018	2.0	1	0.32 <sup>1</sup>	0.23–0.5 <sup>1</sup>	0.1 <sup>2</sup>	0.1–0.11 <sup>3</sup>	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)	2016	15	(0)	2.78 <sup>3</sup>	1.47–3 <sup>3</sup>	0.3 <sup>4</sup>	ND–1.36 <sup>4</sup>	No	Erosion of natural deposits
<b>Haloacetic Acids</b> (ppb)	2019	60	NA	7.4	5.6–9.2	9.06	3.08–13.33	No	By-product of drinking water disinfection
<b>Nitrate [as nitrate]</b> (ppm)	2019	45	45	0.68	ND–2.4	0.33	0.2–0.4	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2019	80	NA	27.5	27–28	0.01 <sup>5</sup>	0.01–0.02 <sup>5</sup>	No	By-product of drinking water disinfection
Tap Water Samples Collected for Copper and Lead 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)	2017	1.3	0.3	0.11	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
<b>Lead</b> (ppb)	2017	15	0.2	8	0/30	No	Internal corrosion of household water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits		

## SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	City of Sonoma		Sonoma Water		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Iron (ppb)	2017	300	NS	192	100–750	134.44 <sup>2</sup>	100–410 <sup>2</sup>	No	Leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	2019	1,600	NS	218.57	180–280	234	210–270	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2019	500	NS	6.43	2.9–13	12	7–15	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2019	1,000	NS	205.71	180–260	156	140–200	No	Runoff/leaching from natural deposits
Turbidity (Units)	2019	5	NS	6	ND–38	0.27	0.04–2	No	Soil runoff
Zinc (ppm)	2019	5.0	NS	0.09	ND–0.22	0.05 <sup>5</sup>	0.05–0.05 <sup>5</sup>	No	Runoff/leaching from natural deposits; industrial wastes

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	City of Sonoma		Sonoma Water	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2019	109.29 <sup>7</sup>	89–131 <sup>7</sup>	137.78	130–160
Bromide (ppb)	2018	27.6 <sup>8</sup>	20–38 <sup>8</sup>	NA	NA
Calcium (ppm)	2019	9.57 <sup>7</sup>	3.9–14 <sup>7</sup>	20.67	12–23
Chromium (ppb)	2018	0.81 <sup>9</sup>	ND–0.96 <sup>9</sup>	10 <sup>2</sup>	10–10 <sup>2</sup>
Germanium (ppb)	2018	0.84 <sup>8</sup>	0.43–2.1 <sup>8</sup>	NA	NA
Magnesium (ppm)	2019	5.89 <sup>7</sup>	1.2–9 <sup>7</sup>	12.58	3.2–16
Manganese (ppb)	2017	9 <sup>8</sup>	ND–44 <sup>8</sup>	23.56 <sup>2</sup>	20–52 <sup>2</sup>
pH (Units)	2019	7.4 <sup>7</sup>	7.0–8.1 <sup>7</sup>	7.73	7.35–8.35
Sodium (ppm)	2019	26.71	18–44	14.97	7.8–46
Total Hardness (ppm)	2019	43.71 <sup>7</sup>	14–72 <sup>7</sup>	103.44	42–123
Total Organic Carbon [TOC] (ppm)	2018	0.15	ND–0.78	NA	NA

<sup>1</sup> Well 8 sampled in 2018.

<sup>2</sup> Sampled in 2019.

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

<sup>4</sup> Sampled in 2014.

<sup>5</sup> Sampled in 2018.

<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.

<sup>7</sup> Sampled in 2017.

<sup>8</sup> UCMR4 sample.

<sup>9</sup> Results from UCMR3 sampling.

## 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.

**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).

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

## 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 storm-water 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 storm-water 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 storm-water 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.

