

A close-up photograph of water being poured from a glass pitcher into a clear glass. The water is captured in mid-pour, creating a dynamic splash and bubbles. The background is a blurred wooden surface.

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018



*Presented By*  
**The City of Petaluma  
Public Works & Utilities**

## 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.

## 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>.



## Where Does My Water Come From?

Petaluma purchases drinking water from Sonoma Water. Water from Sonoma Water originates from three reservoirs: Lake Pillsbury, Lake Mendocino, and Lake Sonoma. Releases from these reservoirs into the Russian River replenish the aquifers beneath the river. The water supply is collected 80 feet below the sand beds adjacent to the Russian River. Natural filtration gives this water its excellent quality; it requires no additional filtration. The only treatment administered is the addition of chlorine, to keep the water pure in the delivery pipeline, and a small amount of sodium hydroxide, to raise the pH to minimize corrosion of household pipes. Sonoma Water supplements its Russian River water supply with groundwater collected from three production wells along the Cotati Aqueduct in the Santa Rosa Plain. For more information about the Russian River water system, please contact Sonoma Water at 404 Aviation Boulevard, Santa Rosa, CA 95403, via phone at (707) 526-5370, or online at [www.sonomawater.org](http://www.sonomawater.org)

The City of Petaluma maintains a ready supply of local groundwater drawn from wells over 400 feet deep. The water is naturally filtered by the sand and gravel it passes through in the aquifers. Chlorine is added to keep the water pure during delivery into the city distribution system.

## 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.





## Source Water Assessment

An assessment of the drinking water sources for the City of Petaluma was completed in March 2003. The sources for the City of Petaluma are considered most vulnerable to the following activities: sewer collection systems, airport maintenance and fueling areas, known contaminant plumes, and underground storage tanks. The sources for Sonoma Water are considered most vulnerable to wastewater disposal and mining operations.

No contaminants associated with these activities have been detected in either of the water supplies. Copies of the completed assessments are available at the Department of Health Services, 50 D Street, Suite 200, Santa Rosa, California. You may request a summary of the assessments by contacting the Department of Health Services, Office of Drinking Water, at (707) 576-2145.

## Community Participation

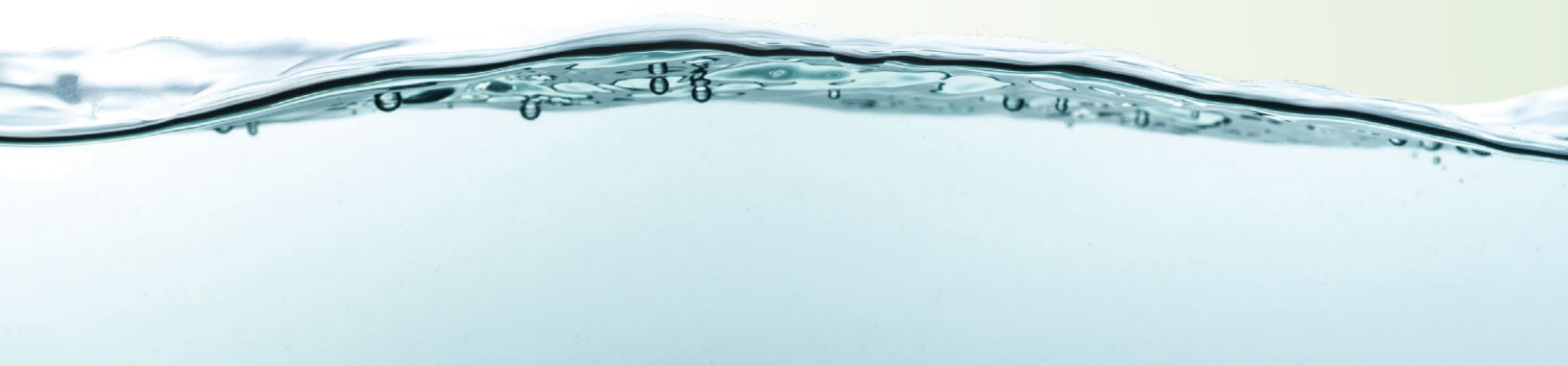
For matters affecting your Public Works and Utilities Department, the Petaluma City Council meets every first and third Monday of the month at Petaluma City Hall. For information on agenda items relating to the Public Works and Utilities Department or other city water matters, please call the city clerk at (707) 778-4360.

## QUESTIONS?

If you have any comments, questions, or suggestions, please contact Joel McIntyre, Public Works and Utilities, at (707) 776-3698 or [JMcIntyre@cityofpetaluma.org](mailto:JMcIntyre@cityofpetaluma.org).

## 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).



## 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 fourth 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									
				Petaluma Public Works & Utilities		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
Aluminum (ppm)	2018	1	0.6	0.065	ND-0.14	0.05	0.05-0.05	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2018	10	0.004	2.24	ND-4.3	2	2-2	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2018	1	2	0.82	ND-0.190	0.1	0.1-0.1	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium [Total] (ppb)	2018	50	(100)	3	ND-10	10	10-10	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2018	2.0	1	0.16	0.11-0.24	0.105	0.10-0.13	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2018	15	(0)	1.00	ND-2.11	0.7187	0.035-0.949	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2018	45	45	0.38	ND-1.3	0.4	ND-0.4	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 228 (pCi/L)	2018	5	0.019	0.02	ND-0.25	0.33	0.33-1.18	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)	2017	1.3	0.3	0.061	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (ppb)	2017	15	0.2	ND	0/30	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)	Petaluma Public Works & Utilities		Sonoma Water		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
<b>Color</b> (Units)	2018	15	NS	1.9	0–12	3.0	3.0–3.0	No	Naturally occurring organic materials
<b>Foaming Agents [MBAS]</b> (ppb)	2018	500	NS	ND	NA	0.05 <sup>1</sup>	ND–0.05 <sup>1</sup>	No	Municipal and industrial waste discharges
<b>Iron</b> (ppb)	2018	300	NS	238	ND–570	110	100–200	No	Leaching from natural deposits; industrial wastes
<b>Manganese</b> (ppb)	2018	50	NS	29	ND–100	22.2	20–42	No	Leaching from natural deposits
<b>Specific Conductance</b> (µS/cm)	2018	1,600	NS	596	430–810	256	220–290	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2018	500	NS	22.2	11–38	12.42	2.0–29	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2018	1,000	NS	366	270–520	147	130–180	No	Runoff/leaching from natural deposits
<b>Turbidity</b> (NTU)	2018	5	NS	1.77	ND–5.8	0.21	0.031–0.73	No	Soil runoff

## UNREGULATED AND OTHER SUBSTANCES <sup>2</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Petaluma Public Works & Utilities		Sonoma Water		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
<b>Total Hardness</b> (ppm)	2018	167	66–313	92.3	36–112	Naturally occurring
<b>Sodium</b> (ppm)	2018	59	36–130	16.13	8.2–45	Naturally occurring

<sup>1</sup> Sampled in 2017.

<sup>2</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.

## 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.

**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).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.