

# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2016



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

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

## 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, 2016. 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 any hour—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.

## 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>.

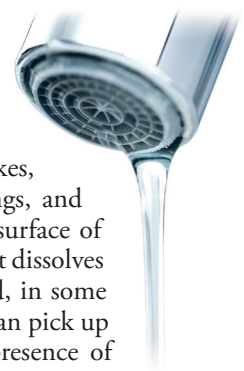


## Community Participation

For matters affecting your Department of Water Resources and Conservation, the Petaluma City Council meets every first and third Mondays of the month at Petaluma City Hall. For information on agenda items relating to the Department of Water Resources or other city water matters, please call the City Clerk at (707) 778-4360.

## 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. State Board regulations 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.

## Where Does My Water Come From?

Petaluma purchases drinking water from the Sonoma County Water Agency (SCWA). SCWA 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 SCWA 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. The SCWA supplements their Russian River water supply with ground water 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 the Sonoma County Water Agency at 404 Aviation Blvd., Santa Rosa, CA, 95403, via phone at 526-5370, or via their website at [www.scwa.ca.gov](http://www.scwa.ca.gov).

The City of Petaluma maintains a ready supply of local ground water. Local ground water, when used, is drawn from wells more than 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 in the delivery into the city distribution system.

## Source Water Assessment

An assessment of the drinking water sources for the City of Petaluma was completed in March 2003. The sources(s) 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 the SCWA 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, CA. You may request a summary of the assessments to be sent to you by contacting the Department of Health Services, Office of Drinking Water, at (707) 576-2145.



## 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 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).



## QUESTIONS?

If you have any comments, questions, or suggestions, please contact Joel McIntyre, Public Works and Utilities, at (707) 776-3698, or email at [jmcintyre@ci.petaluma.ca.us](mailto:jmcintyre@ci.petaluma.ca.us).

## Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; 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 3rd stage of the 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 EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES									
				Petaluma Public Works & Utilities		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
Aluminum (ppb)	2015	1,000	600	73.0	50–140	56.9	50–140	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2015	10	0.004	3.46	0–6.4	2	2–2	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppb)	2015	1	2	104	0–190	100	100–100	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb)	2015	50	(100)	7.3	0–10	10	10–10	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Combined Radium (pCi/L)	2012	5	(0)	0.05	0–0.42	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2015	2.0	1	0.17	0.1–0.24	0.11	0.10–0.17	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2015	15	(0)	2.01	0.91–3.57	0.7187	0.035–0.949	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2015	45	45	0.8	0–1.3	0.4	0–0.4	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 228 (pCi/L)	2012	5	0.019	0.5	0–0.42	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% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2014	1.3	0.3	0.43	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		

## SECONDARY SUBSTANCES

			Petaluma Public Works & Utilities		SCWA				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2015	200	NS	73	50–140	56.9	50–140	No	Erosion of natural deposits; residual from some surface water treatment processes
Color (Units)	2015	15	NS	NA	NA	50	50–50	No	Naturally occurring organic materials
Copper (ppm)	2015	1.0	NS	48.5	0–240	50	0–50	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents [MBAS] (ppb)	2015	500	NS	0.02	0–0.05	0.05	0.05–0.05	No	Municipal and industrial waste discharges
Iron (ppb)	2015	300	NS	424	0–1,600	131	100–510	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2015	50	NS	58	0–120	24	20–72	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2015	1,600	NS	544	440–710	252	230–290	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2015	500	NS	22.5	6.9–38	11.4	2.2–19	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2015	1,000	NS	376	270–520	95.2	40–140	No	Runoff/leaching from natural deposits
Turbidity (Units)	2015	5	NS	1.42	0–2.2	NA	NA	No	Soil runoff

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

		Petaluma Public Works & Utilities		SCWA		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2015	59	24–130	14.7	7.9–40	Naturally occurring
Total Hardness (ppm)	2015	166	66–271	95	40–140	Naturally occurring

<sup>1</sup> Sampled in 2015.

<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

**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

**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).