

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022



*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, 2022. 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.

## Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

“Thousands have lived without love, not one without water.”  
—W.H. Auden

## Source Water Assessment

An assessment of the drinking water sources for the City of Petaluma was completed in March 2003. These sources 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 County Water Agency are considered most vulnerable to wastewater disposal and mining operations.

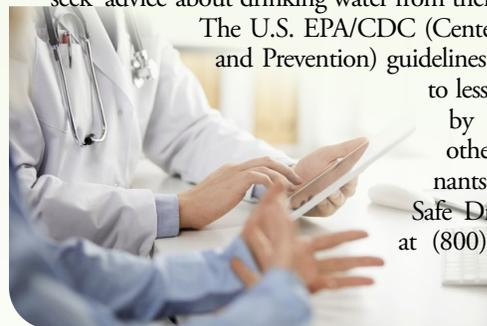
No contaminants associated with these activities have been detected in either of the water supplies. Copies of the completed assessments are available at the Department of Health Services, 50 D Street, Suite 200, Santa Rosa. You may request a summary of

the assessments by contacting the Department of Health Services, Office of Drinking Water, at (707) 576-2145.

## 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 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 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 Public Works and Utilities Supervisor Joel McIntyre, (707) 776-3698 or [JMcIntyre@cityofpetaluma.org](mailto:JMcIntyre@cityofpetaluma.org); or Utility System Operator Jason Archer, (707) 776-3653 or [jarcher@cityofpetaluma.org](mailto:jarcher@cityofpetaluma.org).

## 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, which 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, which 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.

### How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

## Where Does My Water Come From?

Petaluma purchases drinking water from Sonoma County Water Agency that 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 County Water Agency supplements its Russian River 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, (707) 526-5370, or [www.sonomawater.org](http://www.sonomawater.org).

The City of Petaluma maintains a ready supply of local groundwater 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 as it's delivered into the city distribution system.



### 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 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.

### REGULATED SUBSTANCES

				Petaluma Public Works & Utilities		Sonoma County Water Agency			
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)	2022	1	0.6	0.0053	ND–0.053	<0.050	NA	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2022	10	0.004	3.29	ND–13	<2.0	NA	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2022	1	2	0.076	ND–0.190	<1	NA	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium, Total (ppb)	2022	50	(100)	ND	NA	<10	NA	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2022	2.0	1	0.10	ND–0.20	0.12	<0.10–0.14	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2020	15	(0)	0.93 <sup>1</sup>	ND–3.11 <sup>1</sup>	0.7187 <sup>2</sup>	0.035–0.949 <sup>2</sup>	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2022	45	45	0.29	ND–1.4	<0.40	NA	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	ND	NA	0.755	ND–1.18	No	Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	26.00	23.73–28.27	0.122	0.048–0.229	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

				Petaluma Public Works & Utilities		Sonoma County Water Agency			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	0.3	0.055	0/30	NA	NA	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2020	15	0.2	0.009	0/30	NA	NA	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

## SECONDARY SUBSTANCES

				Petaluma Public Works & Utilities	Sonoma County Water Agency				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Color (units)	2021	15	NS	ND	NA	3.29	<3–4	No	Naturally occurring organic materials
Foaming Agents [MBAS] (ppb)	2021	500	NS	ND	NA	5	5–5	No	Municipal and industrial waste discharges
Iron (ppb)	2021	300	NS	270	ND–960	<100	NA	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2021	50	NS	33.60	ND–130	23.3	<20–56	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2021	1,600	NS	621	440–800	230	200–270	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2021	500	NS	22.19	7.90–33.00	9.96	0.53–17	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2021	1,000	NS	347	220–470	160	130–240	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2021	5	NS	2.46	0.26–10	0.21	<0.10–0.95	No	Soil runoff

## UNREGULATED SUBSTANCES <sup>3</sup>

		Petaluma Public Works & Utilities		Sonoma County Water Agency		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2021	61.40	31.00–130.00	19.75 <sup>4</sup>	9.3–55.0 <sup>4</sup>	Naturally occurring
Total Hardness (ppm)	2021	171.90	72.00–313.00	95.09 <sup>4</sup>	28.0–126.0 <sup>4</sup>	Naturally occurring

<sup>1</sup>Last round of testing was conducted in 2020. Testing is conducted every 9 years.

<sup>2</sup>Last round of testing was conducted in 2014. Testing is conducted every 9 years.

<sup>3</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>4</sup>Sampled on August 18, 2021.

## 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.

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**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).

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