



**MARIN
WATER**

2021

Annual Water Quality Report

Inside: Important information about your drinking water

We're pleased to announce that your 2021 Annual Water Quality Report is now available. Similar to prior years, your water continues to meet or surpass federal and state standards. The report includes important information about the source of your water, and the measures we take to ensure it remains clean and safe.



Atención: Consumidores Que Hablan Español

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para más información, o para solicitar una copia del reporte en Español, llame 415.945.1421.

Where Does Your Water Come From?

Chartered in 1912, Marin Water is California's first and the oldest municipal water district. We are proud to provide locally sourced water to more than 191,000 customers in central and southern Marin County.

About 75 percent of our water supply originates from rainfall on 22,000 acres of our protected Mt. Tamalpais watershed and in the grassy hills of west Marin. Rainfall from the watershed flows into the District's seven reservoirs. The water is treated at our treatment plants and then travels through our extensive distribution system—including 908 miles of pipes, 130 storage tanks and 97 pump stations—before making its way to your home or business.

The district also supplements its water supply with water from the Sonoma County Water Agency (SCWA), which comes from the Russian River system in Sonoma County. The Russian River water supply originates from rainfall that flows into Lake Sonoma and Lake Mendocino, and it is naturally filtered through 80 feet of sand beds adjacent to the river. It then goes through a treatment process and is blended with the District's reservoir water within its distribution system.

From the Source: Your Local Water Supply

The California Department of Public Health conducted a Drinking Water Source Assessment of Marin Water's drinking water sources in April 2003. The purpose of this assessment is to identify potential sources of contamination, if any exist, and to share those findings with our customers. The assessment outlined the following:

Our five reservoirs on the Mt. Tamalpais Watershed (Lagunitas, Bon Tempe, Alpine, Kent, and Phoenix), are pristine and forested. These water sources are vulnerable to recreation use in the area. However, no contaminants associated with this activity were detected in the drinking water.

For Nicasio Reservoir, the surrounding watershed consists of grassy hills, and is classified as agricultural and rural residential. This water source is vulnerable to concentrated animal feeding operations (i.e., local dairy operations). However, no contaminants associated with this activity were detected in the drinking water.

For Soulajule Reservoir, the surrounding watershed consists of grassy hills, and is classified as agricultural and rural residential. This water source is vulnerable to historic mining operations. However, no contaminants associated with this activity were detected in the drinking water. Water in Soulajule Reservoir is held in reserve for use during periods of drought or low rainfall.

For additional information, see section 5.6.3.1 of the 2020 Watershed Sanitary Survey at [marinwater.org/SanitarySurvey2020](https://www.marinwater.org/SanitarySurvey2020).

The information in this report is provided in compliance with requirements established by the State Water Resources Control Board Division of Drinking Water, and the U.S. Environmental Protection Agency to inform customers of the contents of their drinking water and water quality standards. This report and additional water quality information is available on our website at [marinwater.org/Water-Quality](https://www.marinwater.org/Water-Quality).



Marin Water Service System

7

Reservoirs

3

Treatment
Plants

97

Pump
Station

130

Storage
Tanks

908

Miles of
Pipeline

Information About Lead in Drinking Water

Lead was not detected above the regulatory action level in the District's water supply. Lead at elevated levels 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. Marin Water is responsible for providing high-quality drinking water, but cannot control the variety of materials used in indoor 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 from your home plumbing, 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 (1.800.426.4791) or at epa.gov/lead.

Lead Testing in Schools

In 2017, the State Water Resources Control Board Division of Drinking Water directed all permitted water systems in California to provide lead monitoring assistance to all public K-12 schools. From 2017 through 2019, the district has assisted 53 schools in monitoring of lead in their tap water. School monitoring data can be found at waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplingschools.html.

Maintaining a High-Quality Drinking Water Supply

Marin Water takes many steps to ensure the water delivered to your tap continues to meet or exceed federal and state drinking water standards. These steps include carefully managing our watershed lands and reservoirs, treating the water, operating and monitoring a complex distribution system, and maintaining and upgrading our facilities.

Every year the district conducts approximately 115,000 water quality and process control tests, from watershed to faucet, to ensure your water is safe to drink. This includes ongoing process control testing at our treatment plants as well as laboratory testing. Many of these samples undergo chemical, bacteriological and physical analyses in the District's water quality laboratory, which is certified by the California State Water Resources Control Board's Environmental Laboratory Accreditation Program. In addition, the district sends other samples to specialty labs.

The tables in this report show the average level and range of each contaminant detected in the water supply from January through December of 2021. All water supplied to customers during 2021 met or exceeded all state and federal regulatory standards. Additional unregulated parameters, such as sodium levels and hardness, are also included in the data tables in this report.

Federally Required Information on Drinking Water

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. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at 1.800.426.4791.

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.

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 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 can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Meeting Regulations

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control 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. Additional information on bottled water is available on the California Department of Public Health's website at www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx.



“
Every year the district conducts approximately 115,000 water quality and process control tests from watershed to faucet to ensure your water is safe to drink.
”

Notifications and General Information

Taste and Odor

Occasionally, during warmer months, some customers may experience a different taste or odor in their drinking water. Some describe the water as tasting and smelling earthy or musty. This is caused by naturally occurring compounds produced by algae blooms. Algae blooms are a natural phenomenon in our reservoirs and a reminder that our lakes are living bodies of water.

During certain times of the year, we may also shift water sources from one reservoir to another to more efficiently manage our water supply. These operational changes can result in changes to the taste and smell of your tap water.

These changes do not affect the safety of your water. Your water is properly treated and meets or exceeds all state and federal requirements for high-quality drinking water.

Special Notice for Immuno-Compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. U.S. Environmental Protection Agency / 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 1.800.426.4791.

Terms

to Know When Reading the Report

Some of the terms, abbreviations, and symbols used in this report are unique to the water industry and may not be familiar to all customers. Terms and abbreviations used in the table on the following pages are explained below:

Maximum Contaminant Level

(MCL): 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 Maximum Contaminant Levels (SMCL):

Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal

Maximum Contaminant Level Goal (MCLG):

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. Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL):

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.

Maximum Residual Disinfectant Level Goal (MRDLG):

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.

Primary Drinking Water Standard (PDWS):

MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

Public Health Goal (PHG): 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 Environmental Protection Agency.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

mg/L:	milligrams per liter (equals parts per million)	µS/cm:	microSiemens per centimeter
µg/L:	micrograms per liter (equals parts per billion)	NTU:	Nephelometric Turbidity Units
TON:	Threshold Odor Number	SCWA:	Sonoma County Water Agency
NA:	Not Applicable	MCL:	Maximum Contaminant Level
ND:	Not Detected	NL:	Notification Level
pCi/L:	PicoCuries per liter	PHG:	Public Health Goal
		UCMR:	Unregulated Contaminant Monitoring Rule

Primary Standards and Results

Detected Contaminants with Primary MCL, AL, or TT

Distribution System (blend of reservoir and SCWA waters)

MICROBIOLOGY	UNITS	MCLG	MCL	HIGHEST MONTHLY	RANGE	SOURCE
--------------	-------	------	-----	-----------------	-------	--------

Total Coliform (State Total Coliform Rule)	% of positive samples	0	5.0 Percent of monthly samples are positive	2.7	0 - 2.7	Naturally present in the environment
--	-----------------------	---	---	-----	---------	--------------------------------------

COPPER AND LEAD	UNITS	PHG	AL	90th PERCENTILE	# of SITES > AL	SOURCE
-----------------	-------	-----	----	-----------------	-----------------	--------

Copper	mg/L	0.3	1.3 ¹	0.13 ²	0 of 51 sites	Internal corrosion of household plumbing systems
---------------	------	-----	------------------	-------------------	---------------	--

Lead	µg/L	0.2	15 ¹	ND ²	0 of 51 sites	Internal corrosion of household plumbing systems
-------------	------	-----	-----------------	-----------------	---------------	--

DISINFECTION BY-PRODUCTS	UNITS	MCLG	MCL	HIGHEST SITE AVERAGE	RANGE	SOURCE
--------------------------	-------	------	-----	----------------------	-------	--------

Haloacetic Acids	µg/L	NA	60 ³	22	ND - 30 ⁴	By-product of drinking water disinfection
-------------------------	------	----	-----------------	----	----------------------	---

Total Trihalomethanes	µg/L	NA	80 ³	48	11 - 64 ⁴	By-product of drinking water disinfection
------------------------------	------	----	-----------------	----	----------------------	---

DISINFECTANT	UNITS	MRDLG	MRDL	AVERAGE	RANGE	SOURCE
--------------	-------	-------	------	---------	-------	--------

Chloramines⁵	mg/L	4	4	1.39	ND - 3.50	Drinking water disinfectant added for treatment
--------------------------------	------	---	---	------	-----------	---

CONSTITUENT	UNITS	PHG	MCL	Reservoir Water		SCWA Water		SOURCE
				AVERAGE	RANGE	AVERAGE	RANGE	

Nitrate	mg/L	10	10	ND	ND	ND	ND - 0.58	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
----------------	------	----	----	----	----	----	-----------	---

¹Action level for 90th percentile value

²51 sites were analyzed in 2021, and the sixth highest concentration out of 51 (90th percentile) is listed

³Compliance is based on the four quarter locational running average (LRAA) of distribution system samples

⁴Range of individual sample results for all monitoring locations

⁵Disinfectants provide protection from viruses and bacteria, such as E. coli

Source Water

CONSTITUENT	UNITS	PHG	TT	LEVEL	RANGE	SOURCE
-------------	-------	-----	----	-------	-------	--------

Turbidity	%	NA	95% of readings < 0.3 NTU	99.5% ¹	99.5 - 100%	Soil runoff
------------------	---	----	---------------------------	--------------------	-------------	-------------

Turbidity	NTU	NA	1	0.39 ²	0.02 - 0.39	Soil runoff
------------------	-----	----	---	-------------------	-------------	-------------

¹Lowest monthly % where turbidity measurements taken in a month is less than or equal to 0.3 NTU

²Highest single turbidity measurement taken in a month

Secondary Standards and Results

Other Detected Constituents Including Those With Secondary MCLS (SMCL)

CONSTITUENT	UNITS	SMCL	Reservoir Water		SCWA Water		SOURCE
			AVERAGE	RANGE	AVERAGE	RANGE	
Odor - Threshold	TON	3	ND	ND - 2	ND	ND - 1	Naturally occurring organic materials
Chloride	mg/L	500	32	12 - 46	7	1 - 10	Runoff/leaching of natural deposits
Specific Conductance	µS/cm	1,600	276	201 - 337	309	278 - 367	Substances that form ions in water
Sulfate	mg/L	500	13	4 - 34	14	12 - 16	Runoff/leaching of natural deposits
Total Dissolved Solids	mg/L	1,000	138	124 - 154	171	161 - 184	Runoff/leaching of natural deposits
Turbidity	NTU	5	0.07	ND - 0.34	ND	ND - 0.09	Soil runoff
Zinc	mg/L	5.0	0.20	0.18 - 0.22	0.17	0.15 - 0.19	Corrosion inhibitor
Sodium	mg/L	NA	24	19 - 28	20	19 - 21	
Hardness ¹	mg/L	NA	75	66 - 80	113	105 - 123	
Hardness	grains/gal	NA	4.4	3.9 - 4.7	6.6	6.1 - 7.2	
Alkalinity ¹	mg/L	NA	69	47 - 89	130	121 - 140	
Radon ²	pCi/L	NA	NA	NA	120	120	

¹Expressed as Calcium Carbonate or CaCO₃

²Radon is a naturally occurring radioactive gas of geologic origin. It can migrate into indoor air through cracks in foundations. Tap water contributions to indoor air are small by comparison. Breathing air containing radon can lead to lung cancer. Ingesting water that contains radon may increase the risk of incurring stomach cancer. For additional information, contact US EPA's radon hotline (800.767.7236).

Unregulated Contaminants*

CONSTITUENT	UNITS	NL	Reservoir Water		SCWA Water		SOURCE
			AVERAGE	RANGE	AVERAGE	RANGE	
Total Organic Carbon ¹	mg/L	NA	2.9	1.9 - 4.1	NA	NA	
Bromide ¹	µg/L	NA	31	25 - 42	NA	NA	
Manganese ²	µg/L	500	2.8	0.6 - 12.2	ND	ND	Manganese exposures resulted in neurological effects
HAA9 ³	µg/L	NA	22	8 - 35	NA	NA	
1,4 Dioxane ⁴	µg/L	1	NA	NA	0.6	ND - 4.2	1,4-Dioxane exposures resulted in cancer, based on studies in laboratory animals

¹2018 source water data collected under UCMR4

²2018 distribution entry point data collected under UCMR4

³2018 distribution data collected under UCMR4. Sum of Bromochloroacetic Acid, Bromodichloroacetic Acid, Chlorodibromoacetic Acid, Dibromoacetic Acid, Dichloroacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid, Tribromoacetic Acid, and Trichloroacetic Acid

⁴1,4 Dioxane was detected at one source for SCWA. Follow up sampling was conducted in March 2022 and April 2022 for the source and samples were ND for 1,4 Dioxane.

*Unregulated contaminant monitoring helps US EPA and the California Department of Public Health to determine where certain contaminants occur and whether the contaminants need to be regulated

Distribution System

CONSTITUENT	UNITS	TT	AVERAGE	RANGE	SOURCE
Fluoride ¹	mg/L	0.6 - 1.2	0.72	0.61 - 0.84	Erosion of natural deposits; water additive that promotes strong teeth
pH	pH units	NA	8.1	7.7 - 8.5	

¹Fluoride occurs naturally in almost all surface and ground waters; following a voter initiative passed in 1972, the fluoride level is maintained at 0.7 mg/L, the optimum level for cavity prevention

Connect With Us

Follow us on social media and sign-up for monthly email updates by subscribing to Marin Water's e-news. Stay informed of the District's water supply, drought updates, home water-saving tips and incentives, watershed projects, volunteer opportunities, District job openings and more.

Scan the QR code or visit the URL below to subscribe.



Scan me

Or visit

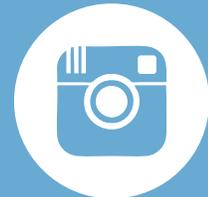
marinwater.org/e-News



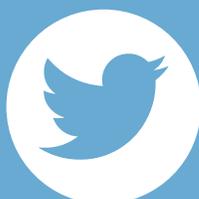
Marin Municipal
Water District



@marinwater



@marin.water



@marinwaterinfo



Marin Water



marinwater.org

Attention: Landlords and Other Property Managers

We recommend that landlords and other property managers display this report in a public location such as a lobby, laundry room, or community room. If you would like to receive additional copies of this report, please call Marin Water at 415.945.1421.

Contact Us

If you have questions about water quality, please contact our Water Quality Laboratory at 415.945.1550 or

WaterQuality@marinwater.org

Public Meetings

Marin Water's Board of Directors meets at 7:30 p.m. on the first and third Tuesdays of every month unless otherwise noticed. All board meetings are open to the public. For details visit marinwater.org/Calendar.





MARIN
WATER