



**MARIN
WATER**

2023

Annual Water Quality Report

Inside: Important information about your drinking water

We're pleased to announce that your 2023 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.



Alpine Lake, one of five reservoirs in the Mt. Tam Watershed.

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 415.945.1400.

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 people in central and southern Marin County.

About 75% 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 County. Rainfall from the watershed flows into the District's seven reservoirs. The water is treated at our treatment plants and then travels through a portion of our extensive distribution system, which includes 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, 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

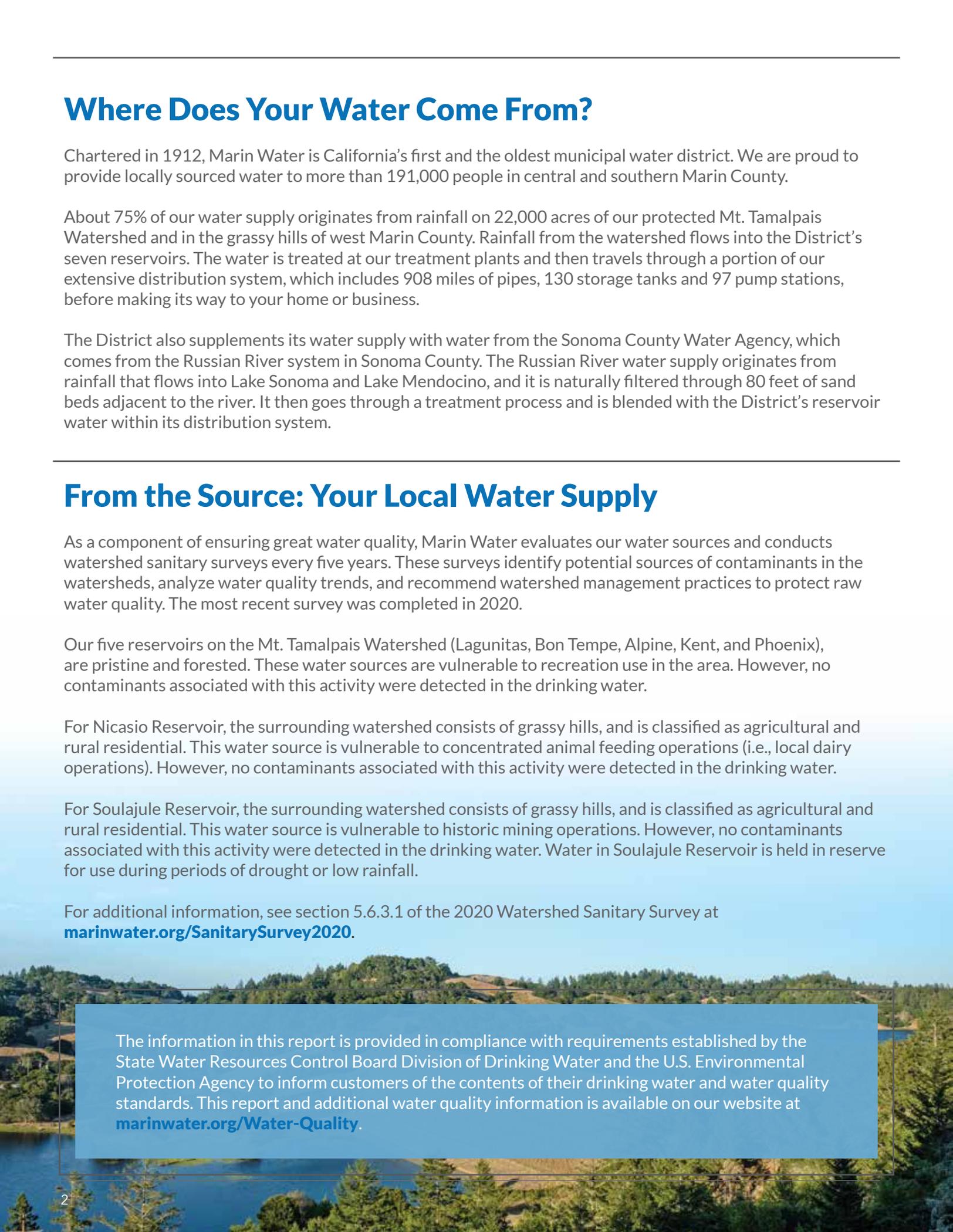
As a component of ensuring great water quality, Marin Water evaluates our water sources and conducts watershed sanitary surveys every five years. These surveys identify potential sources of contaminants in the watersheds, analyze water quality trends, and recommend watershed management practices to protect raw water quality. The most recent survey was completed in 2020.

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
Stations

130

Storage
Tanks

908

Miles of
Pipeline

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 2023. All water supplied to customers during 2023 met or exceeded all state and federal regulatory standards. Additional non-regulated parameters, such as sodium levels and hardness, are also included in the data tables in this report.

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 private service lines and home plumbing. Marin Water is responsible for providing high-quality drinking water to the customers’ meter, but cannot control the variety of materials used in private 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 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 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 assisted 53 schools in the monitoring of lead in their tap water. School monitoring data can be found at waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplinginschools.html.

Information About Per- and Polyfluoroalkyl Substances in Drinking Water

Per- and polyfluoroalkyl substances (PFAS) are a large group of chemicals used since the 1940s in common household and commercial products. Found in a number of common applications, such as fast-food boxes, non-stick cookware, fire-fighting foams and other purposes, PFAS are slow to break down in the environment and therefore are often referred to as “forever chemicals.” The manufacturing and use of products with PFAS introduce these chemicals into the environment, where they may eventually end up in drinking water supplies.

We are fortunate in Marin that the source of our reservoir water is not susceptible to PFAS contamination. PFAS is most commonly found in water sources downstream of potential industrial contamination, groundwater, or areas where there were historically major fires. Our primary supply is sourced from the pristine Mt. Tam Watershed and Nicasio watersheds, which do not have any industrial outfalls. Protection of water quality on the watersheds has always been a top priority of the District, and we have taken measures to protect our watershed by confirming PFAS chemicals are not used for firefighting measures near our watershed. PFOA and PFOS (firefighting chemicals) have been phased out of use already. For additional information about PFAS, visit waterboards.ca.gov/pfas and epa.gov/pfas.

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.

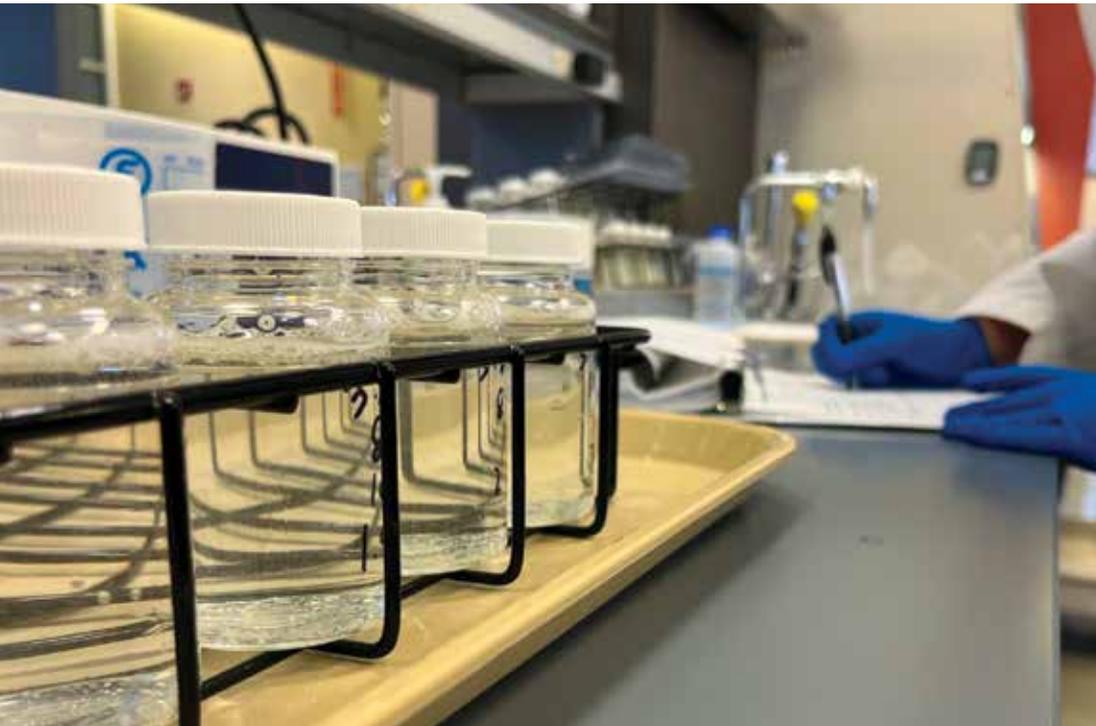
Contaminants that may be present in source water include:

- 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 byproducts 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. 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, which 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 (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.

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.

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)

		Standards		Results		
MICROBIOLOGY	UNITS	MCLG	MCL	HIGHEST MONTHLY		SOURCE
Total coliform (State Total Coliform Rule)	% of positive samples	0	5% of monthly samples are positives	0.7% was the highest percentage found in any month		Naturally present in the environment
COPPER AND LEAD	UNITS	PHG	AL ¹	90TH PERCENTILE ²	# OF SITES > AL	SOURCE
Copper	mg/L	0.3	1.3	0.13	No site over action level	Internal corrosion of household plumbing systems
Lead	µg/L	0.2	15	ND	No site over action level	Internal corrosion of household plumbing systems
DISINFECTION BY-PRODUCTS	UNITS	MCLG	MCL ³	HIGHEST SITE AVERAGE	RANGE ⁴	SOURCE
Haloacetic Acids	µg/L	NA	60	24	ND - 26	By-product of drinking water disinfectant
Total trihalomethanes	µg/L	NA	80	49	11 - 41	By-product of drinking water disinfectant
DISINFECTANT	UNITS	MRDLG	MRDL	AVERAGE	RANGE	SOURCE
Chloramines ⁵	mg/L	4	4	1.79	<0.05 - 3.30	Drinking water disinfectant added for treatment
CONSTITUANT	UNITS	PHG	MCL	AVERAGE	RANGE	SOURCE
Nitrate	mg/L	10	10	ND	ND - 0.58	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

¹ Action level for 90th percentile value

² A total of 51 sites were analyzed in 2021, and the sixth highest concentration out of 51 (90th percentile) is listed

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

⁴ Range of individual sample results for all monitoring locations

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

Source Water

		Standards		Results		
CONSTITUANT	UNITS	PHG	TT	LEVEL	RANGE	SOURCE
Turbidity	%	NA	95% of reading < 0.3 NTU	100% ¹	100%	Soil runoff
Turbidity	NTU	NA	1	0.08 ²	0.02 - 0.08	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	Standards	Reservoir Water		SCWA Water		SOURCE
		SMCL	AVERAGE	RANGE	AVERAGE	RANGE	
Odor - Threshold	TON	3	ND	ND - 1	ND	ND - 1	Naturally occurring organic materials
Chloride	mg/L	500	13	10 - 17	9	8 - 10	Runoff/leaching of natural deposits
Specific Conductance	µS/cm	1600	215	176 - 262	310	265 - 352	Substances that form ions in water
Sulfate	mg/L	500	35	32 - 41	16	15 - 18	Runoff/leaching of natural deposits
Total Dissolved Solids	mg/L	1000	122	107 - 140	168	148 - 188	Runoff/leaching of natural deposits
Turbidity	NTU	5	ND	ND - 0.90	ND	ND	Soil runoff
Zinc	mg/L	5	0.2	0.17 - 0.28	0.17	0.16 - 0.19	Corrosion inhibitor
Sodium	mg/L	NA	20	17 - 26	21	20 - 21	
Hardness ¹	mg/L	NA	57	44 - 65	118	108 - 128	
	grains/gal	NA	3.3	2.6 - 3.8	6.9	6.3 - 7.5	
Alkalinity ¹	mg/L	NA	50	35 - 66	134	116 - 154	
Radon ²	pCi/L	NA	NA	NA	85	85	

¹ Expressed as calcium carbonate, or CaCO₃

² Radon 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 U.S. EPA's radon hotline (800.767.7236).

Distribution System

CONSTITUENT	UNITS	Standards	Results		SOURCE
		TT	AVERAGE	RANGE	
Fluoride ¹	mg/L	0.6 - 1.2	0.7	0.5 - 1.0	Erosion of natural deposits; water additive that promotes strong teeth
pH	pH units	NA	8.1	6.7 - 8.5	

¹ Fluoride 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

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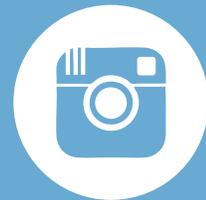
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Attention: Landlords and Other Property Managers

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 415.945.1400.

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 6:30 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.





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Alpine Lake, one of five reservoirs
in the Mt. Tam Watershed.