

A close-up photograph of a person's hands holding a clear, faceted glass filled with water. The person is wearing a grey sweater. The background is softly blurred, showing what appears to be a white surface, possibly a bed or table.

2022 Annual Water Quality Report

Novato Edition | Published July 2023

In North Marin Water District, your water comes from protected watersheds and is purified to remove contaminants and pathogens, like bacteria and viruses. It is continuously monitored to ensure that it surpasses all state and federal standards for health and safety.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para más información, llame al (415) 761-8929.



**NORTH MARIN
WATER DISTRICT**



Delivering high quality water to Novato

Water served by North Marin Water District to its customers comes from protected watersheds and is purified using modern treatment techniques to remove contaminants and pathogens, like bacteria and viruses. Water is continuously monitored to ensure that it surpasses all state and federal standards for health and safety.

This brochure is a snapshot of water quality monitoring performed in 2022. Included are details about where your water comes from, what it contains, and how it compares to regulatory standards.

How your water is treated

North Marin Water District's Stafford Lake Water Treatment Plant produces about 25% of the water needed for Novato. This facility is designed to produce water which meets or surpasses strict state and federal standards for water quality. The water treatment process starts with chlorine dioxide used as an oxidizer and polymers to remove contaminants, prior to filtration through layers of anthracite and garnet sand. The water then passes through granular activated charcoal to remove any remaining impurities before adjusting the pH to 8.3 for corrosion control and the addition of a small amount of chlorine for disinfection.

Most of Novato's water supply is purchased as treated water from Sonoma County Water Agency (SCWA). The SCWA water supply is collected from gravel beds 80-100 feet below and adjacent to the Russian River. The quality of this naturally filtered water is excellent, making additional treatment unnecessary. Water from additional SCWA wells in the Santa Rosa plain can be blended with the

Russian River well water to augment water supply. Before delivering water to Novato, SCWA adds a small amount of chlorine to maintain disinfection and sodium hydroxide to adjust the pH to 8.3.

The Stafford Lake water supply blends with the SCWA water supply in the Novato water distribution system. The percentage from each source can vary by location, by day, and by season.

Safe, clean water

As you continue to keep your family safe from the COVID-19 virus you can feel confident that your tap remains a safe and reliable source of clean, good-tasting drinking water. If you have any questions regarding this Water Quality Report, contact Pablo Ramudo, Water Quality Supervisor, (415) 761-8929 or (800) 464-6693.

Drinking water source assessment for SCWA groundwater supply

In January 2001, a drinking water source assessment for all of the SCWA's water sources was conducted to identify if any potential sources of contamination exist.

The SCWA source water is extracted from groundwater via six Ranney collector wells and seven conventional wells located at Wohler and Mirabel, and three wells in the Santa Rosa Plain. The aquifer is recharged by subsurface flows and Russian River water filtering down through the gravel riverbed.

Most of the SCWA water supply comes from the wells at Wohler and Mirabel adjacent to the Russian River. These sources are considered to be most vulnerable from wastewater treatment and gravel mining in the area. However, no contaminants associated with these activities were detected in the drinking water.

The SCWA also operates three groundwater wells on the Santa Rosa Plain near Occidental Road, Todd Road and Sebastopol Road. These sources are considered to be most vulnerable from animal feeding operations. However, no contaminants associated with this activity were detected in the drinking water.

A copy of the complete assessment may be reviewed at the California Water Board - Division of Drinking Water Field Operations Branch office located at 50 D Street, Suite 200, Santa Rosa, CA 95404. You may request a summary of this assessment be sent to you by contacting the Office Representative at (707) 576-2145 (voice) or by email to dwpdist18@waterboards.ca.gov.

Drinking water source water assessment for Stafford Lake

An assessment of watershed activities, which may affect the Stafford Lake source of supply, was performed in 2002 as required by the U.S. Environmental Protection Agency (U.S. EPA). The watershed activities identified with the highest potential for contamination of Stafford Lake are animal feeding/waste disposal at the existing stable and former dairy operations on the watershed. These activities increase the potential to introduce microbial contaminants and nutrients to Stafford Lake. North Marin Water District actively works with the stable and ranch owners to control their operations and reduce potential contaminants. The Stafford Lake source water is routinely monitored by North Marin Water District to ensure the controls are effective.

A copy of the complete assessment is on file at the North Marin Water District office at 999 Rush Creek Place, Novato, CA 94945.

Stafford Lake Water Treatment Plant



2022 Water Quality Data

Primary Drinking Water Standards

Table 1: Report on detected constituents with a primary drinking water standard (PDWS)					Sonoma County Water Agency		Stafford Water Treatment Plant	
Constituent	Units	PHG / [MRDLG] (MCLG)	MCL / [MRDL] (PDWS)	Typical Source	Average	Range	Average	Range
Fluoride	mg/L	1.0	2.0	Erosion of natural deposits	ND	ND	0.13	0.13
Nitrate (as N)	mg/L	10	10	Soil runoff from fertilizers, leaching from septic systems and sewage	ND	ND	ND	ND
Radioactivity Gross Alpha	PCi/l	0	15	Erosion of natural deposits	ND (1)	ND (1)	ND (2)	ND (2)
Barium	mg/L	2	1	Erosion of natural deposits	ND	ND – 0.10	ND	ND
Distribution System								
Chlorine, Free	mg/L	[4.0]	[4.0]	Drinking water disinfectant added for treatment	Average = 0.71 Range = 0.12 – 1.38			
Total Coliform Bacteria	% of samples positive	n/a	TT	Naturally present in the environment	All samples negative for coliform bacteria (970 samples collected).			
E Coli	% positive samples	(0)	0	Human and animal fecal waste	All samples negative for E coli (970 samples collected).			
Total Trihalomethanes (3)	µg/L	n/a	80	Byproduct of drinking water disinfection	Highest Location Running Annual Average = 53.0 Range = 23 – 69			
Total Haloacetic Acids (3)	µg/L	n/a	60	Byproduct of drinking water disinfection	Highest Location Running Annual Average = 13.8 Range = 3.7 – 19.7			
Copper (4)	µg/L	170	(AL 1300)	Internal corrosion of household plumbing systems	90th percentile = 100, Range = ND – 120 None of the 30 samples collected above the action level			
Lead (4)	µg/L	0.2	(AL 15)	Internal corrosion of household plumbing systems	90th percentile = ND, Range = ND None of the 30 samples collected above the action level			

(1) 2014 Data, (2) 2012 Data, (3) Compliance based on a four-quarter running average at each distribution system monitoring location, (4) 2020 Data.

Legend

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 Environmental Protection Agency.

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.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water by regulation. Primary standards based on health, set as close to the PHGs and MCLGs as is economically and technologically feasible. These standards are developed and imposed by the California and/or U.S. EPA.

SMCL (Secondary Maximum Contaminant Level): Secondary standards based on aesthetics, set to protect the odor, taste, and appearance of drinking water. These standards are developed and imposed by the California and/or U.S. EPA.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs, for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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

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

NTU (Nephelometric Turbidity Units): A measure of suspended material in water.

90th Percentile: Compliance based on highest value after eliminating the highest 10% of values.

MRDL (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a disinfectant added for water treatment below which there is no known or exposed risk to health. MRDLGs are set by the U.S. EPA.

NL (Notification Level): The notification level for some unregulated contaminants.

mg/L: Milligrams per liter (parts per million) – equivalent to 4 drops of water in the average sized bathtub.

µg/L: Micrograms per liter (parts per billion) – equivalent to 50 drops in an olympic size swimming pool.

ng/L: Nanograms per liter (parts per trillion)

µmhos/cm: Micromhos per centimeter

ND: Not Detected
NA: Not Analyzed
N/A: Not Applicable
PCU: Platinum cobalt units
pCi/l: Picocuries per liter

Secondary Drinking Water Standards

Table 2: Constituents with aesthetic concerns and/or a secondary drinking water standard				Sonoma County Water Agency		Stafford Water Treatment Plant	
Constituent	Units	SMCL	Typical Source	Average	Range	Average	Range
Color	PCU	15	Naturally occurring organic materials	4	3 – 5	ND	ND
Odor	TON	3	Naturally occurring organic materials	ND	ND	ND	ND
Chloride	mg/L	500	Runoff / leaching of natural deposits	8.6	5.8 – 23	87	82 – 92
Sulfate	mg/L	500	Leaching of natural deposits, treatment chemicals	13	3.3 – 16	9.6	8.9 – 10
Turbidity	NTU	5	Soil runoff	0.13	0.02 – 0.73	0.14	0.13 – 0.14
Total Dissolved Solids	mg/L	1000	Runoff / leaching of natural deposits	155	140 – 200	280	270 – 300
Sodium	mg/L	n/a	Naturally occurring and treatment chemicals	14	9.6 – 37	45	42 – 48
Hardness (5)	mg/L	n/a	Leaching of natural deposits	115	56 – 140	140	130 – 140
Radon	pCi/l	n/a	See “Radon in Air” on page 5	180	120 – 360	n/a	n/a
Specific Conductance	µmhos/cm	1600	Substances that form ions in water	260	250 – 290	510	480 – 530
Manganese	µg/L	50	Leaching from natural deposits	ND	ND – 28	ND	ND

(5) Average hardness shown of 115 to 140mg/L is equivalent to 6.5 to 7.9 °dH or 6.7 to 8.2 grains per gallon.

Other Water Quality Parameters

Table 3: Unregulated contaminants									
Constituent	Units	Notification Level	Response Level	Typical Source	NMWD System Range	NMWD System Average	NMWD Source Range	NMWD Source Average	Meets Regulations (Yes/No)
Brominated Haloacetic Acids (HAA6BR) (6)	µg/L	n/a	n/a	Byproduct of drinking water disinfection	0.84 – 8.8	5.8	n/a	n/a	Yes
Haloacetic Acids (HAA9) (6)	µg/L	n/a	n/a	Byproduct of drinking water disinfection	2.0 – 2.2	9.6	n/a	n/a	Yes
Perfluorooctane Sulfonic Acid (PFOS) (7)	ng/L	5.1	40	Industrial contamination	n/a	n/a	ND	ND	Yes
Perfluorobutane Sulfonic Acid (PFBS) (7)	ng/L	500	5000	Industrial contamination	n/a	n/a	ND	ND	Yes
Perfluorohexane Sulfonic Acid (PFHxS) (7)	ng/L	3	20	Industrial contamination	n/a	n/a	ND	ND	Yes
Perfluoroheptanoic Acid (PFHpA) (7)	ng/L	n/a	n/a	Industrial contamination	n/a	n/a	ND	ND	Yes
Perfluorononanoic Acid (PFNA) (7)	ng/L	n/a	n/a	Industrial contamination	n/a	n/a	ND	ND	Yes
Perfluorooctanoic Acid (PFOA) (7)	ng/L	5.1	10	Industrial contamination	n/a	n/a	ND	ND	Yes

(6) 2019 data, (7) Monitoring conducted 2014 – 2015.



A message from the United States Environmental Protection Agency

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 materials, 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 applications and septic systems.
- Radioactive Contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California State Water Resources Control Board's Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. California 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. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800) 462-4791. 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 462-4791.

Cryptosporidium & Giardia

Monitoring performed by North Marin Water District on untreated water in Stafford Lake has intermittently shown the presence of cryptosporidium, a microbial pathogen found in surface waters throughout the U.S. North Marin Water District's filtration is designed and operated to remove cryptosporidium, but 100% removal cannot be guaranteed. Should you be concerned? Healthy individuals should not be concerned. However, immunocompromised people are at greater risk. We suggest immunocompromised individuals consult their physician regarding appropriate precautions.

Radon in air

Radon is a radioactive gas that can move from decomposed granite soils into a home through cracks and holes in the foundation. Radon can also get into indoor air when running tap water for showering and other household activities. In most cases, radon from tap water is a small source of radon in air. Radon is a known human carcinogen. It can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach



cancer. The SCWA water was tested for Radon and showed an average of 180 and a range of 120 to 360 pci/L (picocuries per liter). There is no federal regulation for radon levels in drinking water. Exposure over a long period of time to air transmitting radon may cause adverse health effects.

If you are concerned about radon in your home, test the air in your home: Testing is inexpensive and easy. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Notice to kidney dialysis patients

Chlorine dioxide is used as pre-oxidant in water produced from Stafford Lake Water Treatment Plant. Customers undergoing kidney dialysis treatment are advised to use sufficient pre-treatment to ensure chlorine dioxide does not pose a threat to the dialysis process.

Concerning lead and drinking water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. There is no lead in drinking water produced by North Marin Water District and there are no district owned lead service lines within our system, however lead can leach into drinking water from materials and components associated with customers' service lines and home plumbing.

North Marin Water District is responsible for providing high quality drinking water to your meter, but cannot control the variety of materials used in home plumbing components. When water in your household plumbing has been sitting for several hours, you can minimize the potential for lead exposure by running your tap water for 30 seconds to 2 minutes before using water for drinking or cooking.

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/safewater/lead

nmwd.com/wq

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