

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020



Presented By
City of Napa



Quality First

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. We dedicate 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.

The City of Napa encourages citizens to participate in our City Council meetings, which take place on the first and third Tuesday of each month from 3:30 - 5:00 p.m. and again from 6:30 - 9:00 p.m., in our Council Chambers at City Hall, 955 School Street. For more information concerning City activities, please see our website at <https://www.cityofnapa.org>.

Protecting Our Watersheds

The City of Napa is devoted to protecting the land surrounding our local source waters in order to maintain the quality and purity of water used for Napa's drinking water consumers. In the long term, protecting our watersheds is one of the least costly and most important actions we can take to reduce the risk of unwanted constituents in our drinking water. Algal growth due to the addition of nutrients is the number one cause of taste and odor affecting your tap water. Nutrients in the watershed are increased artificially by wastewater systems as well as fertilizers and runoff from agricultural practices. Every five years, the City of Napa conducts Source Water Assessments to evaluate the quality of the water used as the drinking water supply and to examine activities associated with the specific waterway and surrounding areas to determine their contribution to contamination.

These potential contributors are then compiled into a Vulnerability Summary. Results from the Vulnerability Summaries show that these are the most significant potential sources of contaminants for the City of Napa's source waters:

Lake Hennessey (completed April 2018): Pacific Union College Wastewater Treatment Plant, vineyards, fires, invasive species, potential hazardous material spills due to traffic accidents (on Highway 128 near lake), septic tank systems (in Angwin), and grazing and wild animals.

Lake Milliken (completed April 2018): Fires, vineyards, and grazing and wild animals.

Sacramento Delta (updated 2017): Recreational use, urban and agricultural runoff, grazing animals, herbicide application, and seawater intrusion.

Copies of the complete assessments are available through the SWRCB DDW Santa Rosa District Office, 50 D Street, Suite 200, Santa Rosa, CA 95404 or Ms. Amy Little, Associate Sanitary Engineer, SWRCB at (707) 576-2145.

Where Does My Water Come From?

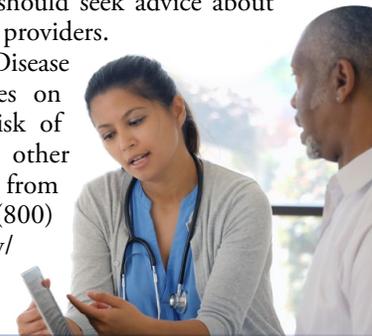
City of Napa customers benefit from a flexible water supply including three different sources. Depending on which treatment plant is in operation, the source comes from: 1. Barker Slough in the Sacramento Delta via the North Bay Aqueduct (treated by the Edward I. Barwick Jamieson Canyon Water Treatment Plant); 2. Lake Hennessey (treated by the Hennessey Water Treatment Plant), or 3. Lake Milliken (treated by the Milliken Water Treatment Plant).



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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>.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Erin Kebbas, Water Quality Manager, at (707) 253-0822. For questions concerning the City of Napa Water Division, in general, please call (707) 257-9521. See our website for up-to-date information on programs: <https://www.cityofnapa.org/water>. For emergencies or customer use during weekends and holidays, please call (707) 253-4451.

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, 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 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.

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. Unlike other regions of the U.S. where lead was prevalent, it was not the predominant construction material used in the City of Napa for water service installations. In addition, years of monitoring show that the existing public system pipe network does not contribute lead to our drinking water. Our next lead and copper collection is scheduled for July 2021. The City of Napa is 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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.



Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals' technical knowledge includes a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and finished water protection;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Protecting Your Water

Bacteria are a natural and important part of our world. There are around 40 trillion bacteria living in each of us; without them, we would not be able to live healthy lives. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern, however, because it indicates that the water may be contaminated with other organisms that can cause disease.

In 2016, the U.S. EPA passed a regulation called the Revised Total Coliform Rule, which requires additional steps that water systems must take in order to ensure the integrity of the drinking water distribution system by monitoring for the presence of bacteria like total coliform and *E. coli*. The rule requires more stringent standards than the previous regulation, and it requires water systems that may be vulnerable to contamination to have in place procedures that will minimize the incidence of contamination. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment of their system and correct any problems quickly. The U.S. EPA anticipates greater public health protection under this regulation due to its more preventative approach to identifying and fixing problems that may affect public health.

The City of Napa was an early adopter of the Revised Total Coliform Rule. Our strictly regulated water treatment operation and distribution system maintenance ensures the City of Napa consistently upholds a high standard of preventative actions to maintain public health.

Water Conservation Tips

In a drought, you can play a role in conserving water and save yourself money in the process. Become aware of the amount of water your household is using and look for simple ways to use less. Here are a few tips:

- Do laundry and dishes only when you have a full load.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Reduce your outdoor irrigation by one day per week. This simple action will help us meet our drought year goal of using 15% less water than last year.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water.

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend up to 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost less than a dollar.

Concerned about Taste & Odor?

Seasonally, you may experience taste and odor in your tap water associated with algae in our surface water. If you installed and properly maintained a granular activated carbon filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at <https://www.NRDC.org/stories/truth-about-tap>.



Test Results

Our water is monitored for hundreds of different kinds of substances (including but not limited to metals or inorganic chemicals, volatile organic chemicals, man-made substances and disinfection by-products) on a very strict schedule and our goal is to keep any detections below their respective maximum allowed levels. Remember that detecting a substance does not mean the water is unsafe to drink. Here, in this report, we show only those substances that were detected in our water in 2020. **Your water met all U.S. EPA and SWRCB standards in 2020.**

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling 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 the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED (LRAA) [RAA]	RANGE LOW-HIGH	IN COMPLIANCE	TYPICAL SOURCE
Aluminum (ppm)	1	0.6	0.05	0.00–0.09	Yes	Erosion of natural deposits; residue from some surface water treatment processes
Bromate (ppb)	10	0.1	[0.001]	0.000–0.002	Yes	By-product of drinking water disinfection
Chlorine (ppm)	[4.0 (as Cl ₂)]	[4.0 (as Cl ₂)]	[0.89]	0.02–1.57	Yes	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (removal ratio)	TT	NA	[1.91]	1.24–2.69	Yes	Various natural and man-made sources
Haloacetic Acids (ppb)	60	NA	(39.0)	0.0–51.9	Yes	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	80	NA	(67.9)	25.6–87.0	Yes	By-product of drinking water disinfection
Total Coliform Bacteria (Positive samples)	Maximum % of positive samples < 5.0	NA	2/1306 [0.15%]	Highest monthly % positive - 0.97%	Yes	Naturally present in the environment

Filter Performance (Turbidity—the Standard Measure of Clarity in Water)

SUBSTANCE (UNIT OF MEASURE)	MCL	PHG	AMOUNT DETECTED	IN COMPLIANCE	TYPICAL SOURCE
Turbidity (NTU, highest detected measurement)	TT	TT	NA	0.21	Yes Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit		NA	100.0	Yes Soil runoff

Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community in 2018

SUBSTANCE (UNIT OF MEASURE)	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	IN COMPLIANCE	TYPICAL SOURCE
Copper (ppm)	1.3	0.3	0.3	0/31	Yes	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	15	0.2	ND	0/31	Yes	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	SMCL	PHG (MCLG)	AVERAGE	RANGE LOW-HIGH	IN COMPLIANCE	TYPICAL SOURCE
Chloride (ppm)	500	NS	13	11–15	Yes	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µS/cm)	1,600	NS	299	202–598	Yes	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	NS	48	48–48	Yes	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1,000	NS	274	196–457	Yes	Runoff/leaching from natural deposits
Turbidity (NTU)	5	NS	0.12	0.02–2.8	Yes	Soil runoff

UNREGULATED SUBSTANCES¹

SUBSTANCE (UNIT OF MEASURE)	AVERAGE	RANGE LOW-HIGH	TYPICAL SOURCE
Hardness, Total [as CaCO₃] (ppm)	105	63–162	Naturally occurring in groundwater and surface water
Sodium (ppm)	19	13–24	Naturally occurring in groundwater and surface water

¹ Unregulated contaminant monitoring helps the 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

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 that, 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.

DBP: Disinfection By Product

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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

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.

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).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

TOC: Total Organic Carbon

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

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. Drought strikes in virtually all climate zones, from very wet to very dry.

The winter rains of 2020 did not replenish Lake Hennessey, our largest local surface water supply reservoir. We received under 10 inches of rain, significantly less than our 27-inch average. This drought year requires we reduce our summer time outdoor irrigation by 15%.

Drought is a temporary aberration from normal climatic conditions; thus it can vary significantly from one region to another. Although drought occurs normally, human factors, such as water demand, can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.