

2020 CONSUMER CONFIDENCE REPORT

Water System Name: Napa Berryessa Resort Improvement District (LBRID) Report Date: June 29, 2021

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 to December 31, 2020 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Lake Berryessa Resort Improvement District a 707-253-4351 para asistirlo en español.

Type of water source(s) in use: Surface Water, Lake

Name & general location of source(s): Lake Berryessa, at the NBRID treatment facility

Drinking Water Source Assessment information:

The Napa Berryessa Resort Improvement District monitors for contaminants in your drinking water according to Federal and State laws. The tables that follow show the results of our monitoring for the period January 1st to December 31st, 2020. Source water assessments are performed on a periodic basis by the State Water Resources Control Board, Division of Drinking Water Programs as part of the Drinking Water Source Assessment Program (DWSAP). Finished water assessments are also performed periodically. Copies of assessments are available at the NBRID administration office in downtown Napa.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

A source assessment for the District has not been completed; however, such assessments have been completed for other Districts surrounding Lake Berryessa. We believe that when an assessment is done for your system, the results will be identical to the assessments already completed for similar systems on the lake. A Watershed Sanitary Survey was completed in 2018. A copy of the Survey may be obtained by calling the contact listed below.

According to those vulnerability assessments, your water source is most vulnerable to contamination from boats and personal watercraft, confirmed leaking underground fuel storage tanks, known contaminant plumes, historic and active gas stations, wastewater treatment plants, historic and active mining operations, and animal feeding operations.

Time and place of regularly scheduled board meetings for public participation:

The Napa County Board of Supervisors functions as the Governing Board of your Resort Improvement District. Regular monthly meetings are typically held on the first Tuesday of each month, however, special meetings can be held as the need to meet arises.

Should any member of the community wish to become more involved with District issues, or wish to receive regular updates on District issues, please contact the main office at 707-253-4351 to be directed to the appropriate staff person.

For more information, contact:

Annamaria Martinez, Assistant Engineer
Annamaria.martinez@countyofnapa.org Phone: (707) 259-8378

TERMS USED IN THIS REPORT

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 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 (U.S. EPA).

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.

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

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variations and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

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.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter ($\mu\text{g/L}$)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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* that can be naturally-occurring or be the result of oil and gas production and mining activities.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the 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.

About Your Drinking Water Quality - [Drinking Water Contaminants Detected](#)

Tables 1, 2, 3, 4, 5, 6, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a mo.)	0 *	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	(In the year)	0 *	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(In the year)	0 *	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER								
Lead and Copper	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppm)	7/27/2020 – 7/30/2020	10	Non-Detect	0	0.015	0.2	Not applicable	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/27/2020 – 7/30/2020	10	0.087	0	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Hardness (ppm)	7/9/2020	170	---	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Aluminum (ppb)	7/9/2020	78	---	1000	600	Erosion of natural deposits; residue from some surface water treatment processes
Antimony (ppb)	7/9/2020	< 6	---	6	20	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	7/9/2020	< 2	---	10	0.0004	Erosion of natural deposits; runoff from orchards
Barium (ppb)	7/9/2020	53	---	1000	2.0	Erosion of natural deposits
Chromium (ppb)	7/9/2020	1.1	---	50	1.0	Erosion of natural deposits
Fluoride (ppm)	7/9/2020	0.27	---	2.0	1.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	7/9/2020	< 0.4	---	10	2.0	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Thallium (ppb)	7/9/2020	< 1	---	2	0.1	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

DISINFECTION BYPRODUCTS (DBP)

Chemical or Constituent	Sample Date	Range of Detections	Final Running Annual Average	MCL	Highest Quarterly Running Average	Typical Source of Containment
TTHM (ppb)	2020	17 - 88	57.75	80	84.5	Byproduct of drinking water disinfection
HAA5 (ppb)	2020	25 - 50	39.63	60	50.38	Byproduct of drinking water disinfection
Control of DBP Precursors (TOC)	2020 (Monthly)	Met or exceeded the standards for the year.				Various natural and manmade sources

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	7/9/2020	5.5	---	500	N/A	Runoff/leaching from natural deposits
Color (color units)	7/9/2020	5	---	15	N/A	Naturally occurring organic materials

Copper (ppb)	7/9/2020	< 50	---	1000	N/A	Erosion of natural deposits
Foaming Agents (MBAS) (ppm)	7/9/2020	< 0.05	---	0.5	N/A	Municipal and industrial waste discharges
Iron (ppb)	7/9/2020	< 100	---	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb)	7/9/2020	< 20	---	50	N/A	Leaching from natural deposits
Odor (TON)	7/9/2020	< 1.0	---	3	N/A	Naturally occurring organic materials
Silver (ppb)	7/9/2020	< 10	---	100	N/A	Runoff/leaching from natural deposits
Specific Conductance (umhos/cm)	7/9/2020	330	---	1600	N/A	Runoff/leaching from natural deposits
Sulfate (ppm)	7/9/2020	23	---	250	N/A	Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	7/9/2020	180	---	1000	N/A	Runoff/leaching from natural deposits
Zinc (ppb)	7/9/2020	< 50.0	---	5000	N/A	Runoff/leaching from natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
None Detected						

Additional General 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 the 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 (1-800-426-4791).

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 health care providers. U.S. EPA/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 (1-800-426-4791).

The Lake Berryessa Resort Improvement District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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. 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 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

TABLE 7 - VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT			
Violation	Explanation	Duration	Actions Taken to Correct the Violation
1. COLIFORM MONTIORING	In December of 2020 we failed to test distribution system water for the presence of coliform bacteria.	December 2020	<ul style="list-style-type: none"> • Staff has reviewed monitoring schedules and implemented review protocols to ensure all samples are taken in any given month. • All other regular monthly sampling events were conducted and within compliance
HEALTH EFFECTS LANGUAGE FOR COLIFORM	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.		
2. TTHM - Total Trihalomethanes	The running annual average of quarterly TTHM sampling, exceeded the MCL of 80 ug/L for the first two quarters in 2020. The system has been in compliance with TTHM regulations since July 2020.	Quarters 1 & 2 2020	<ul style="list-style-type: none"> • Operations staff conducts hydrant flushing year round to facilitate turnover of water in the system, and storage tank level set points are set to also improve turnover. • Process control modifications occur continuously throughout the year to adapt to seasonal raw water quality changes to maximize removal of natural organic precursors during treatment – includes the recent installation of a pre-treatment settling tank. • Installation of a mixing and aeration system for each tank is under investigation.
HEALTH EFFECTS LANGUAGE FOR TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.		

Description of Water Treatment Process - Your water is treated by filtration and disinfection. Filtration removes particles suspended in the source water. Particles typically include clays and silts, natural organic matter, iron and manganese, and microorganisms. Your water is also treated by disinfection. Disinfection involves the addition of chlorine or other disinfectants to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

TABLE 10 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	Immersed Membrane, Disinfection
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.10 NTU in 95% of measurements in a month. 2 – Not exceed 2.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	99.3% (January 2020 – Filter Train 1)
Highest single turbidity measurement during the year	0.844 (01/17/2020 – Filter Train 1)
Number of violations of any surface water treatment requirements	0

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

TABLE 11 - VIOLATION OF A SURFACE WATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Surface Water Treatment Rule	In order to ensure proper disinfection, water in the treatment plant must be in contact with Chlorine or a similar disinfectant for a minimum of time. On June 5, 2020 between 8:30 am and 9:45 am, this did not occur. Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the “contact time,” depends on the amount of disinfectant in the water and the temperature of the water.	June 5, 2020, 8:30 am - 9:45 am	Injectors used to add chlorine to treated water have been included in a quarterly preventative maintenance plan, and the alarm system used to notify operation staff of low chlorine residual has been updated and re-programmed to notify operators earlier if chlorine levels drop.	Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.