2019 Consumer Confidence Report

Water System Name: **Napa Berryessa Resort Improvement District (NBRID)** Report Date: **June 29, 2020**

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, 2019 and may include earlier monitoring data.

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

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

Name & 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, 2019. 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 Board of Directors 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 Phone: (707) 259-8378

Annamaria.martinez@countyofnapa.org

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.

Variances and Exemptions: Permissions from the State Water Resources Control Board (State Board) 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 (µg/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)

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*, 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. 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.

Tables 1, 2, 3, 4, 5, and 6 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 month)	0	1 positive monthly sample[(a)]	0	Naturally present in the environment
Fecal Coliform or *E. coli* (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 *E. coli* positive		Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year)	0	(b)	0	Human and animal fecal waste

(a) Two or more positive monthly samples is a violation of the MCL
(b) 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 testing not performed in 2019. The results of the 2017 sampling event are shown below for information)

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	Nov – Dec 2017	20	< 0.005	0	0.015	0.2		Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	Nov – Dec 2017	20	0.160	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
Sodium (ppm)	07/16/19	5.9	---	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	07/16/19	150	---	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)	07/16/19	< 50	---	1000	600	Erosion of natural deposits; residue from some surface water treatment processes
Antimony (ppb)	07/16/19	< 6	---	6	20	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	07/16/19	< 2	---	10	0.0004	Erosion of natural deposits; runoff from orchards
Barium (ppb)	07/16/19	< 100	---	1000	2.0	Erosion of natural deposits
Chromium (ppb)	07/16/19	< 1	---	50	1.0	Erosion of natural deposits
Nitrate (ppm)	07/16/19	< 40	---	45	2.0	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

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)*	Quarterly	79 - 100	87	80	91.3 (Q1)	Byproduct of drinking water disinfection
HAA5 (ppb)	Quarterly	26 - 93	51.5	60	51.5 (Q4)	Byproduct of drinking water disinfection

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**SMCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chloride (ppm)	07/16/19	5.5	---	500	N/A	Runoff/leaching from natural deposits
Color (color units)	07/16/19	10	---	15	N/A	Naturally occurring organic materials
Copper (ppb)	07/16/19	< 50	---	1000	N/A	Erosion of natural deposits
Foaming Agents (MBAS) (ppm)	07/16/19	< 0.05	---	0.5	N/A	Municipal and industrial waste discharges
Iron (ppb)	07/16/19	< 100	---	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb)	07/16/19	< 20	---	50	N/A	Leaching from natural deposits
Odor (TON) *	07/16/19	4	---	3	N/A	Naturally occurring organic materials
Silver (ppb)	07/16/19	< 10	---	100	N/A	Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	07/16/19	180	---	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (umhos/cm)	07/16/19	320	---	1600	N/A	Runoff/leaching from natural deposits
Sulfate (ppm)	07/16/19	24	---	250	N/A	Runoff/leaching from natural deposits
Zinc (ppb)	07/16/19	< 50	---	5000	N/A	Runoff/leaching from natural deposits

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).

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. The Napa Berryessa Resort Improvement District is responsible for providing high quality drinking water, but 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 (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

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT			
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**
1. Odor	The raw water odor threshold was found at levels that exceeded the secondary MCL of 3 TON.	Summer 2019	Treatment is performed on the raw water prior to distribution to customers to eliminate natural odor in raw water. In order to reduce the nuisance odor problem that are not removed during treatment, staff has adjusted coagulant levels to assist with the removal of odor causing organic matter prior to treatment.
HEALTH EFFECTS LANGUAGE FOR ODOR	Odor testing is a useful indicator of water quality even though water with odor testing results that are below the MCL is not necessarily safe to drink. Odor is also an indicator of the effectiveness of different kinds of treatment. As odor falls under secondary drinking water standards, it is not considered to present a risk to public health. The violation of the odor MCL in the raw water is from naturally occurring organic materials		
2. TTHM - Total Trihalomethanes	The running annual average of quarterly TTHM sampling, exceeded the MCL of 80 ug/L throughout 2019.	Quarters 1 – 4 2019	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. A mixing and aeration system was installed in May/June 2020 in the 500,000 gallon potable water storage tank to assist with the removal of TTHMs prior to distribution.
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.

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [a] (Type of approved filtration technology used)	Granular media filtration, 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 0.20 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.	99.4%
Highest single turbidity measurement during the year	4.986 NTU on September 24. (Operations staff shut down the filter until turbidities were below the permitted value for Performance Standard No. 1 above)
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

VIOLATION OF A SURFACE WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
NA				

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill.
- Visit www.epa.gov/watersense for more information.

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