

# 2012 Consumer Confidence Report

Water System Name: Lake Berryessa Resort Improvement District (LBRID) Report Date: June 24, 2013

*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 - December 31, 2012 and may include earlier monitoring data.*

**Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.**

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

**Name & location of source(s):** Putah Creek, approximately ¼ mile south of the Water Treatment Facility.

**Drinking Water Source Assessment information:** The Lake 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 1<sup>st</sup> to December 31<sup>st</sup>, 2012. Source water assessments are performed on a periodic basis by the California Department of Public Health (CDPH) as part of the Drinking Water Source Assessment Program (DWSAP). Finished water assessments are also performed periodically. Copies of both assessments are available at the LBRID 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 Drinking Water Source Assessment was completed for the surface water source for the LBRID water system in March 2003 by CDPH. If you would like a copy of the completed assessment, please call the LBRID administration office in downtown Napa to have a copy mailed to you.

According to the assessment, 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.

**Community 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

### 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 (USEPA).

**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:** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**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)

**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 by-products 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 USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

**Tables 1, 2, 3, 4, and 5 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 Department 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.

**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* (TC)	<u>TC / EC</u> (In a mo.) 3 / 0	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (EC)	<u>TC / EC</u> (In the year) 4 / 0		A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>		Human and animal fecal waste

**TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER**

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 <sup>th</sup> percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) (performed in 2010)	10	< 5	0 / 10	15	0.22	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) (performed in 2010)	10	< 0.050	0 / 10	1.3	0.3	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)	07/16/12	11	---	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	07/16/12	230	---	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

\*Any violation of an MC or AL is asterisked. Additional information regarding the violation is provided later in this report.

**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)	07/16/12	80	---	1000	600	Erosion of natural deposits; residue from some surface water treatment processes
Antimony (ppb)	07/16/12	< 6.0	---	6	20	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	07/16/12	2.2	---	10	0.0004	Erosion of natural deposits; runoff from orchards

**TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD, CONT'D**

Barium (ppb)	07/16/12	< 100	---	1000	2.0	Erosion of natural deposits
Beryllium (ppb)	07/16/12	< 1.0	---	4	1.0	Discharge from metal refineries, coal burning factories, and electrical, aerospace and defense industries
Cadmium (ppb)	07/16/12	< 1.0	---	5	0.04	Internal corrosion of galvanized pipes, erosion of natural deposits
Chromium (ppb)	07/16/12	< 1.0	---	50	1.0	Erosion of natural deposits
Fluoride (ppm)	07/16/12	0.14	---	2	1.0	Erosion of natural deposits
Mercury (ppb)	07/16/12	< 1.0	---	2	1.0	Erosion of natural deposits
Nickel (ppb)	07/16/12	< 10.0	---	100	12	Erosion of natural deposits
Nitrate (ppb)	07/16/12	< 2.0	---	45	2.0	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	07/16/12	< 5.0	---	50	5.0	Erosion of natural deposits; discharge from mines; runoff from livestock lots
Thallium (ppb)	07/16/12	< 1.0	---	2	1.0	Leaching from ore-processing sites

**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)	07/16/12	9.4	---	500	N/A	Runoff/leaching from natural deposits
Color (color units)	07/16/12	15	---	15	N/A	Naturally occurring organic materials
Copper (ppb)	07/16/12	< 50.0	---	1000	N/A	Erosion of natural deposits
Foaming Agents (MBAS) (ppm)	07/16/12	< 0.05	---	0.5	N/A	Municipal and industrial waste discharges
Iron (ppb)	07/16/12	120	---	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb)	07/16/12	< 1.0	---	50	N/A	Leaching from natural deposits
Odor (TON) *	07/16/12	17	---	3	N/A	Naturally occurring organic materials
Silver (ppb)	07/16/12	< 10.0	---	100	N/A	Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	07/16/12	270	---	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (umhos/cm)	07/16/12	480	---	1600	N/A	Runoff/leaching from natural deposits

**TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD, CONT'D**

Sulfate (ppm)	07/16/12	18	---	250	N/A	Runoff/leaching from natural deposits
Zinc (ppb)	07/16/12	< 50.0	---	5000	N/A	Runoff/leaching from natural deposits

\*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

### 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 USEPA'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. 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 (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 Lake 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 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 <http://www.epa.gov/safewater/lead>.

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

**Total Coliform MCL Violation:** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. A notification of this violation was mailed to water customers in December 2012.

As coliform occurs naturally in the environment it is important to note that a positive coliform test for a water system can be caused by true bacterial contamination of the water, or it can be caused by various external factors including erroneous sampling techniques, dirty sampling bottles, poorly disinfected sample taps, lab errors, etc. Unfortunately there is usually no way to determine if the positive sample is from actual contamination of the water or from a sampling or lab error.

**Odor MCL Violation:** The raw water odor threshold was found at levels that exceeded the secondary MCL of 3 TON. 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

**For Systems Providing Surface Water as a Source of Drinking Water**

<b>TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES</b>	
Treatment Technique <sup>(a)</sup> (Type of approved filtration technology used)	Immersed Membrane, disinfection
Turbidity Performance Standards <sup>(b)</sup> (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.30 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.	100%
Highest single turbidity measurement during the year	0.140 (03/29/12)
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.

\* Any violation of a TT is marked with an asterisk. Additional information regarding the violation is provided below.

**Summary Information for Violation of a Surface Water TT**

<b>VIOLATION OF A SURFACE WATER TT</b>				
<b>TT Violation</b>	<b>Explanation</b>	<b>Duration</b>	<b>Actions Taken to Correct the Violation</b>	<b>Health Effects Language</b>
N/A				

**Summary Information for Operating Under a Variance or Exemption**

N/A

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