2015 Consumer Confidence Report

Water System Name: **City of Calistoga** Report Date: May 6, 2016

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, 2015 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: Reservoir, surface water

Name & general location of source(s): The City of Calistoga has two water sources. The first water source comes from Lake Kimball that sends raw water to the City's Kimball Water Treatment Facility where it is treated and sent into the distribution system. The second water source can come from one of three water treatment facilities (Jamieson Canyon Treatment Plant; Hennessey Treatment Plant and Milliken Treatment Plant) from the City of Napa who treat and wheel drinking water to the City of Calistoga through the North Bay Aqueduct (NBA) Transmission Line.

Drinking Water Source Assessment information: Drinking water source assessments evaluate the quality of water used for drinking water supplies in local communities. The survey examines activities associated with the specific waterways and surrounding areas to determine possible contribution to contamination. These potential contributors are then complied into a Watershed Sanitary Survey. The results from these reports show that the most significant potential sources of contaminants for the City of Calistoga's source waters are:

Lake Hennessey (assessment completed, Dec. 2012): Pacific Union College Waste Water Treatment Plant, septic tank systems (in Angwin), vineyards, hazardous materials spills due to traffic accidents (particularly on Hwy 128 near the lake) and fires.

Lake Milliken (assessment completed, Dec. 2012): Grazing animals, wild animals, fires and vineyards.

Sacramento Delta (assessment completed, Jun 2012): Recreational use, urban runoff agricultural runoff, grazing animals, herbicide application and seawater intrusion.

Kimball (Lake Ghisolfo) Reservoir (assessment completed, Nov. 2008): Wild animals, geologic hazards and fires.

A copy of the complete assessments are available at the Department of Waterboards, 50 D Street, Suite 200, Santa Rosa, Ca. 94504. You may request a summary of the assessment be sent to you by contacting Karen Stufkosky, Associate Sanitary Engineer, California Department of Waterboards.

Time and place of regularly scheduled board meetings for public participation: The City of Calistoga encourages

citizens to participate in City Council meetings. The meetings are held on the first and third Tuesday of the month at 6:00 p.m. at the Community Center, 1307 Washington Street, Calistoga, CA.

For more information, contact: Mike Kirn – Public Works Director Phone: 707 – 942-2828

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.

Variances and Exemptions: State Board 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 (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 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 Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, 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.

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	(In a mo.)	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year)	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	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)	Sample Date	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	8/27/13	29	6	1	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	8/27/13	29	0.9	1	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)	2/3/15	5.0		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2/3/15	82.0		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MCL 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
Chlorine	Daily	1.3 ave.	0 - 2.3	{4.0} (as Cl2)	{4.0} (as Cl2)	Drinking water disinfectant added for treatment

TTHM's (ug/l) Total Trihalomethanes	Site 5 Quarterly Site 10	107.75 59.75	88.0-122.0 44.0-84.0	80	N/A	By-product of drinking water chlorination and organics
HAA's (ug/l) Haloacetic Acids	Site 5 Quarterly Site 10	35.65 46.50	7.6-48.0 27.0-76.0	60	N/A	By-product of drinking water chlorination.
TOC's (mg/l) Total Organic Carbon	Monthly	2.3	1.5-3.1	TT	N/A	Various natural and man-made 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	2/3/15	3.0		500	N/A	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (uS/cm)	2/3/15	180		1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (mg/l)	2/3/15	12		500	N/A	Runoff/leaching from natural deposits; industrial wastes
TDS (mg/l) Total Dissolved Solids	2/3/15	140		1000	N/A	Runoff/leaching from natural deposits
Odor (TON) Threshold Odor Number	2/3/15	40		3	N/A	Naturally occurring organic materials

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

**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).

Lead-Specific Language for Community Water Systems: 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. Calistoga 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. [Optional: 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 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	Health Effects Language
TTHM	Drinking water is treated, wheeled and purchased from the City of Napa and sent through the NBA Transmission pipeline. This water at times can travel up to 38 miles from one of Napa's treatment facilities to the insertion point of the Calistoga Distribution system. The organics in the water and the chlorine that is added for disinfection creates Trihalomethanes that exceeded the trigger level of 80 ug/l.	12 months	Napa has taken measures to help lower THM's in the water they send by making operational changes in the treatment facility that is 38 miles away and have placed mixers in the treatment facility that is closer to our distribution system which is helping to reduce the THM's in the water. The City is installing mixers in its storage tanks and has adjusted its automatic chlorine dosing pump at the NBA pump station to reduce over chlorination of water.	Drinking water containing these byproducts in excess of the MCL, may lead to adverse health effects; liver, or kidney problems, or nervous system effects; and may lead to an increased risk of getting cancer.
TON	Algae growth in reservoir and treatment plant utilizes sodium hypochlorite for disinfection	3 months	Calistoga called two companies to come and copper sulfate reservoir, neither provided quote, next quarter sample the TON was below MCL	Although aesthetically unappealing to sense of smell, while we had a single high value the next sample was below MCL

For Water Systems Providing Ground Water as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES					
Microbiological Contaminants (complete if fecal-indicator detected)	**Total No. of Detections**	**Sample Dates**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
E. coli	(In the year)		0	(0)	Human and animal fecal waste
Enterococci	(In the year)		TT	n/a	Human and animal fecal waste
Coliphage	(In the year)		TT	n/a	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE
The City Does not utilize Ground Water Sources for the Public Supply System.

SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES

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

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)	Pressure filters
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 0.3 NTU's in 95% of measurements in a month. 2 – Not exceed 1.0 NTU's for more than eight consecutive hours. 3 – Not exceed 5.0 NTU's at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100

Highest single turbidity measurement during the year	0.270 ntu's
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

VIOLATION OF A SURFACE WATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
TTHM	Receiving water from water purveyor resulted in just below, at or above trigger level of 80 mg/l, and sample site of 414 Washington Street is a dead-end line.	12 months	Water purveyor has made some operational changes to one of their treatment facilities and mixers have been placed in the clear wells of the other treatment facility.	Drinking water containing these byproducts in excess of the MCL, may lead to adverse health effects; liver, or kidney problems, or nervous system effects; and may lead to an increased risk of getting cancer.

Summary Information for Operating Under a Variance or Exemption