

**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
*Total Coliform Bacteria Failure to collect repeat water sample after a routine water sample was tested and found to contain total coliform	We are required by state regulations to monitor our drinking water for specific contaminants on a regular basis. In January 2011, one routine bacteriological sample tested positive for coliform bacteria. We failed to collect the required follow up (or repeat) samples	1 Month	A training session with the water operations staff has been conducted on the drinking water regulations regarding the requirement for follow up (repeat) water testing for coliform bacteria.	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.
* Fecal Coliform or E. coli Failure to collect repeat water sample after a routine water sample was tested and found to contain E. coli	We are required by state regulations to monitor our drinking water for specific contaminants on a regular basis. In January 2011, one routine bacteriological sample tested positive for E. coli. We failed to collect the required follow up (or repeat) samples	1 Month	A training session with the water operations staff has been conducted on the drinking water regulations regarding the requirement for follow up (repeat) water testing for coliform bacteria.	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 6 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	Conventional Filtration
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 in 95% of measurements in a month. 2 – Not exceed 1.0 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	0.26
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
*Total Organic Carbon Failure to remove the required amount of total organic carbon (TOC) (DBPP)	In the month of March the routine monitoring samples were not collected.	1 Month	The water treatment plant sampling schedule has been modified.	Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these products in excess of the MCL may lead to adverse health affects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
*Total Organic Carbon Failure to remove the required amount of total organic carbon (TOC) (DBPP)	In the month of October samples were collected for TOC before and after our treatment process to determine the percentage of TOC removal. Results showed that we removed less than the required percentage	1 Month	An examination of the treatment processes was conducted to improve the percentage of TOC removal. Water treatment chemical dosage adjustments were required	Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these products in excess of the MCL may lead to adverse health affects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.



2011 Consumer Confidence Report

Water System Name: City of Calistoga

Report Date: May 27, 2012

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, 2011.

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

Name & location of source(s): The City of Calistoga has two water sources. The first is the city owned and operated Kimball Reservoir (treated by the Kimball Surface Water Treatment Plant) which supplies approximately 50 % of the annual total water consumption. The State Water Project (via the City of Napa) provides the balance of yearly water use. Water from the City of Napa may be from several sources but is primarily from Lake Hennessey (treated by the Hennessey Surface Water Treatment Plant). For your convenience, a copy of Napa's Consumer Confidence Report is enclosed.

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 waterway and surrounding areas to determine their possible contribution to contamination. These potential contributors are then compiled 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 2007): 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 2007): Grazing animals, wild animals, fires and vineyards.

Sacramento Delta (assessment completed, Jun 2007): Recreational use, urban runoff, agricultural runoff, grazing animals, herbicide application and seawater intrusion.

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

A copy of the complete assessment is available at the Department of Health Services, 50 D Street, Suite 200, Santa Rosa, CA 94504. You may request a summary of the assessment be sent to you by contacting Amy Little, Associate Sanitary Engineer, California Department of Health Services, at (707) 576-2147.

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 7:00 p.m. at the Community Center, 1307 Washington Street Calistoga CA.

For more information contact: Warren Schenstrom Water Systems Superintendent Phone: (707) 942-2847

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 (ug/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.

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).

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.) 1*	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year) 1*	1	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	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)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	27	4	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	27	0.4	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)	02/08/11	6.8	---	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	02/08/11	81	---	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
Chlorine (mg/L)	Daily	1.3	0.6 – 1.8	[4.0] (as Cl ₂)	[4.0] (as Cl ₂)	Drinking water disinfectant added for treatment
TTHM's (ug/L) Total Trihalomethanes	Quarterly	68	47 – 104	80	N/A	By-product of drinking water chlorination
HAA'S (ug/L) Haloacetic Acids	Quarterly	45	24 – 61	60	N/A	By-product of drinking water chlorination
TOC's (mg/L) Total Organic Carbon	Monthly	0.9*	0.2 – 1.7	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 (mg/L)	02/08/11	3.4	---	500	N/A	Runoff / leaching from natural deposits; seawater influence
Specific Conductance (uS/cm)	02/08/11	200	---	1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	02/08/11	12	---	500	N/A	Runoff / leaching from natural deposits; industrial wastes
TDS (mg/L) Total Dissolved Solids	02/08/11	170	---	1000	N/A	Runoff / leaching from natural deposits
Odor (TON) Threshold Odor Number	Quarterly	7	4 – 8	3	N/A	Naturally occurring organic materials

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