

2016 Consumer Confidence Report

Water System Name: City of Susanville (#1810001) Report Date: June 2017

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, 2016 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: Spring and groundwater wells

Name & general location of source(s): Cady Springs; Bagwell Springs; and Wells 01, 03, 04, & 05

Drinking Water Source Assessment information:

The State Water Resources Control Board Division of Drinking Water (Division) has conducted assessments of the City's water sources. The City's sources are considered most vulnerable to automobile gas stations, chemical/petroleum processing/storage, historic waste dumps/landfills, wastewater treatment plants not associated with any detected contaminants, water supply and agricultural/irrigation wells, low-density septic systems, sewer collection systems, lagoons/liquid wastes, active landfills/dumps, junk/scrap/salvage yards, irrigated and non-irrigated crops, agricultural drainage, grazing and fertilizer, and pesticide/herbicide application associated with the detection of nitrate, aluminum, iron, or arsenic.

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

City Council Meeting, 1st and 3rd Wednesday of the month at 7:00 pm at 66 N Lassen St., Susanville, CA 96130

For more information, contact: Russ Brown, Water Operator Phone: (530) 257-1041

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.

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 (µg/L)

Primary Drinking Water Standards (PDWS): ppt: parts per trillion or nanograms per liter (ng/L)
MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements. ppq: parts per quadrillion or picograms per liter (pg/L)
pCi/L: picocuries per liter (a measure of radiation)

In general, sources of drinking 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 - 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. There are no violations of an AL, MCL, MRDL, or TT.

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	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	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	0	Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(In the year) 0	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 (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppm)	2016	20	.0045	0	.015	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2016	20	0.1826	0	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)			5.0-84.0	none	none	Salt present in the water and is generally naturally occurring
Bagwell	2011	7.0				
Cady	2011	5.0				
Well 01	2011	84.0				
Well 03	2014	67.0				
Well 04	2014	12.0				
Well 05	2008	21.0				
Hardness (ppm)			29.0-96.9	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Bagwell	2011	89.4				
Cady	2011	74.5				
Well 01	2011	75.5				
Well 03	2014	96.9				
Well 04	2014	69.6				
Well 05	2008	29.0				

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
Arsenic (ppb)			2.0-6.0	10.0	0.004	Erosion of natural deposits; runoff from orchards
Well 01	2010	5.0				
Well 03	2014	6.0				
Well 04	2014	2.0				
Well 05	2008	4.0				
Barium (ppb)				1000	2000	Discharges of oil drilling wastes from metal refineries; erosion of natural deposits
Bagwell & Cady	2010	5.2	1.9-8.5			
Well 01	2011	19.6	-			
Well 03 & 04	2014	33.9	11.3-37.1			
Well 05	2008	4.0	-			
Chromium, Total (ppb)			-	50	100	Erosion of natural deposits; discharge from pump mills
Bagwell & Cady	2010	1.0				
Well 01	2010	1.0				
Well 03	2014	1.0				
Well 04	2014	1.0				
Well 05	2008	1.0				
Chromium, VI (ppb)			-	10.0	0.02	Erosion of natural deposits; discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities
Bagwell & Cady	2014	0.8				
Well 01	2014	0.7				
Well 04	2014	1.3				
Well 05	2014	0.5				
Fluoride (ppm)			-	2.0	1.0	Erosion of natural deposits
Cady	2011	0.1				
Bagwell	2008	0.8				
Well 01	2011	1.0				
Well 03	2014	0.1				
Well 05	2008	0.3				

Lead (ppb)						
Bagwell & Cady	2010	0.2	-	15	0.2	Internal corrosion of water plumbing systems; discharge from industrial manufacturers; erosion of natural deposits
Well 01	2010	4.6				
Well 04	2014	0.9				
Well 05	2008	0.8				
Nitrate (ppm)						
Bagwell, Cady & Wells 01 – 05	2016	0.38	0.10-1.40	10.0	.40	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks and sewage
Gross Alpha (pCi/L)						
Bagwell, Cady & Wells 01, 03, 04	2016	0.61	0.29-1.16	15.0	3.0	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks and sewage

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)				500	-	Runoff; leaching of natural deposits
Bagwell & Cady	2011	1.0	-			
Well 01	2011	42.0	-			
Well 03 & 04	2014	21.0	2.0-40.0			
Well 05	2008	2.0	-			
Color				15	-	Naturally occurring organic material
Bagwell, Cady, & Wells 01, 03, 04, 05	2011	7.5	5-9			
Iron (ppb)				300	-	Erosion of natural deposits
Bagwell, Cady, & Well 01	2011	50.0	-			
Wells 03 & 04	2014	50.0				
Well 05	2008	160.0				
Specific Conductance (µS/cm)				1,600	-	Substances that form ions when in water
Bagwell, Cady, & Well 01	2011	311	174-554			
Wells 03 & 04	2014	381	204-559			
Well 05	2008	161	-			
Sulfate (ppm)				500	-	Run-off/leaching of natural deposits
Bagwell & Cady	2010	2.0	-			
Well 01	2011	105	-			
Wells 03 & 04	2014	56.5	2.1-111			
Well 05	2008	21	-			
Total Dissolved Solids (ppm)				1,000	-	Run-off/leaching of natural deposits
Bagwell, Cady, & Well 01	2011	101	84-120			
Well 03 & 04	2014	270	150-390			
Well 05	2008	120	-			
Turbidity (NTU)				5	-	Soil runoff/deposits
Bagwell, Cady, & Wells 01, 03 & 05	2011	0.3	0.2-0.4			
Well 04	2014	0.3	-			

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Chlorine (ppm)	2015	0.2	0.1-0.3	4.0	Disinfectant added for treatment
Haloacetic Acids (ppb)	2016	1.0	1.0	60	Disinfection byproducts

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. City of Susanville 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 (1-800-426-4701) 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
NONE				

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
<i>E. coli</i>	0 (In the year)	-	0	(0)	Human and animal fecal waste
Enterococci	0 (In the year)	-	TT	n/a	Human and animal fecal waste
Coliphage	0 (In the year)	-	TT	n/a	Human and animal fecal waste

Additional Notes:

For water systems with more than one source, the level detected is an average of the single results at each source for the monitoring period.

Water Conservation Tips for Consumers

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 minutes 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 are 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 to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. 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.