2016 Consumer Confidence Report

Water System Name: **City of Tehama** Report Date: 03/24/2017

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: 2 groundwater wells

Name & general location of source(s): Well 3 and Well 4 are located in the City of Tehama

Drinking Water Source Assessment information: A source water assessment was completed 10/2001 for Well 3 and 5/2003 for Well 4 serving the City of Tehama Water System. The evaluations showed that the sources are considered most vulnerable to the following activities not associated with any detected contaminants: high density septic systems. A re-assessment in 2010 and again in 2015 showed the evaluation to remain unchanged. Copies of the complete assessments may be viewed at: Division of Drinking Water Valley District Office, 364 Knollcrest Dr., Suite 101, Redding, CA 96002, 530-224-4800 or at City of Tehama, 250 Cavalier Dr., Tehama, CA 96090, 530-384-1501.

Time and place of regularly scheduled board meetings for public participation:
2nd Tuesday of each month at 6 PM at Tehama City Hall, 250 Cavalier Dr., Tehama, CA 96090

For more information, contact: Carolyn Steffan, City Clerk Phone: (530)384-1501

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.

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.

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

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.

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 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, 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 mo.) 0	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (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 *E. coli* positive		Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(from 4/1/16-12/31/16) 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**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	7/1/16	5	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/1/16	5	.027	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 –MG/L

Chemical or Constituent (and reporting units)		**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	Well 3 Well 4	8/6/14 8/17/12	26 25		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	Well 3 Well 4	8/6/14 8/17/12	119 110		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	Well 3 Well 4	8/6/2014 6/26/09	10 UG/L 10 UG/L		1000	50	Erosion of natural deposits; residue from some surface water treatment processes
Antimony	Well 3 Well 4	8/6/14 6/26/09	1.0 UG/L 1.0 UG/L		6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	Well 3 Well 4	8/6/14 8/17/12	2.0 UG/L 3.0 UG/L		10	2	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium	Well 3 Well 4	6/8/14 6/26/09	102 /UG/L 116/UG/L		1000	100	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Beryllium	Well 3 Well 4	8/6/06 6/26/09	1.0 UG/L 0.2 UG/L		4	1	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
Cadmium	Well 3 Well 4	8/6/14 6/26/09	0.2 UG/L 0.2 UG/L		5	1	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints
Chromium	Well 3 Well 4	8/6/2014 6/2009	5 UG/L		50	10	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Flouride	Well 3 Well 4	8/6/14 6/26/09	0.1 MG/L 0.1 MG/l		2	0.1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury	Well 3 Well 4	8/6/14 6/26/09	0.02 UG/L 0.02 UG/L		2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nickle	Well 3 Well 4	6/8/14 6/26/09	10 UG/L 5 UG/L		100	12	Erosion of natural deposits; discharge from metal factories
Nitrate(N)	Well 3 Well 4	8/1/16 8/1/16	0.7mg/L 1.5mg/L		10mgL	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Nitrite(N)	Well 3 Well 4	8/6/2014 8/3/15	0.1 UG/L 0.1 UG/L		1000	400	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Perchlorate	Well 3 Well 4	8/6/14 8/6/14	2 UG/L 2 UG/L		6	1	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts
Seleniun	Well 3 Well 4	8/6/14 6/26/09	1 UG/L 2 UG/L		50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Thallium	Well 3 Well 4	8/6/14 6/26/09	0.2 UG/L 0.2 UG/L		2	0.1	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

TABLE 5 – DETECTION OF CONTAMINANTS WITH A <u>SECONDARY</u> DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)		**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Aluminum	Well 3 Well 4	8/6/14 6/26/09	10 UG/L 10 UG/L		1000	50	Erosion of natural deposits; residual from some surface water treatment processes
Color	Well 3 Well 4	8/6/14 6/26/09	5 units 5 units		15		Naturally-occurring organic materials
Copper	Well 3 Well 4	8/6/14 8/3/15	20 UG/L 4 UG/L		1000	50	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents	Well 3 Well 4	8/6/14 6/26/09	0.1MG/L 0.1 MG/L		0.5		Municipal and industrial waste discharges
Iron	Well 3 Well 4	8/6/14 6/26/09	30 UG/L 50 UG/L		300	100	Leaching from natural deposits; industrial wastes
Manganese	Well 3 Well 4	8/6/14 6/26/09	10 UG/L 0.5 UG/L		50	20	Leaching from natural deposits
Methyl-tert-butyl ether (MTBE)	Well 3 Well 4	8/6/14 6/26/09	1UG/L 1 UG/L		13	3	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor –Threshold	Well 3 Well 4	8/6/14 6/26/09	1TON 1 TON		3	1	Naturally-occurring organic materials
Silver	Well 3 Well 4	8/6/14 6/26/09	1UG/L 1UG/L		100	10	Naturally-occurring organic materials
Turbidity		8/6/14 6/26/09	0.3 NTU 0.2 NTU		5	.1	Soil runoff
Zinc		8/6/14 8/3/15	50 UG/L 10 UG/L		5000	50	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)		8/6/14 8/3/15	220 MG/L 240 MG/L		1000		Runoff/leaching from natural deposits
Specific Conductance		8/6/14 8/3/15	341 US 381 US		1600		Substances that form ions when in water; seawater influence

Chloride	Well 3 Well 4	8/6/14 6/26/09	15 MG/L 18 MG/L		500		Runoff/leaching from natural deposits; seawater influence
Sulfate	Well 3 Well 4	8/6/14 8/3/15	8.8 MG/L 18 MG/L		500		Runoff/leaching from natural deposits; industrial wastes

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

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

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. The City of Tehama 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 (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**
21-15C-032	**Lead & Copper samples not taken in 2012**	**Samples to be taken summers of 2015/2016/2018**	**Samples taken 2015/2016. Sample to be taken 2018.**	*****

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	(0)	Human and animal fecal waste
Enterococci	(In the year) 0		TT	n/a	Human and animal fecal waste
Coliphage	(In the year) o		TT	n/a	Human and animal fecal waste

***Lead**

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA 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 City of Tehama 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/lead.

***Copper**

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.