

2016 Consumer Confidence Report

Water System Name: City Of Willits Report Date: 4-11-17

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: Reservoir

Name & general location of source(s): Morris and Centennial reservoirs are located in the hills just south of the City of Willits.

Drinking Water Source Assessment information: Last completed in January 2008, by Env. Science Associates. A Water Sanitary Survey was updated in August 2013. Copies of both reports are available by contacting City Hall at 707-459-4601.

Time and place of regularly scheduled board meetings for public participation: Willits City Council meetings are held at 6:30 pm every 2nd and 4th Wednesday in the Council Chamber at 111 E. Commercial St.

For more information, contact: Scott Herman, Utilities Superintendent Phone: (707) 459-4605

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): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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)	2	1	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	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)	(from 4/1/16-12/31/16)	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 (ppb)	7/20/16-8/14/16	20	0.00	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/20/16-8/14/16	20	0.33	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)	1/15/16	2.8		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	1/15/16	38		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 (ppm)	1/1/16- 12/31/16	0.71	0.25-1.17	[MRDL= 4.0 (as Cl ₂)]	[MRDL = 4.0 (as Cl ₂)]	Drinking water disinfectant added for treatment
TTHM's (Total Trihalomethanes) (ug/l) (Avg)	1/13/16- 12/31/16	40.3	30.6-50.0	80	N/A	Byproduct of drinking water disinfection
HAA5 (Haloacetic Acids)(ug/l) (Avg)	1/13/16- 12/31/16	27.3	17.0-37.7	60	N/A	Byproduct of drinking water disinfection
Total Organic Carbon (TOC) (ppb)(Avg)	1/1/16- 12/31/16	167.5	123-212	TT	N/A	Various natural and man-made sources
Nitrate as (N) (mg/l)	1/15/16	<.40		10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

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
Manganese (Mn) (ppb)	1/15/16	30		50		Leaching from natural deposits
Odor—Threshold (ton)	3/23/16	<1		3		Naturally-occurring organic materials
Specific Conductance (umhos/cm)	1/15/16	88		900- 1600- 2200		Substances that form ions when in water; seawater influence
Iron (Fe) (ppb)	1/15/16	1000 (Finished Water =<100)		300		Leaching from natural deposits: industrial waste
Color (Unfiltered) (Units)	3/23/16	60 (Finished Water=<5)		15		Naturally-occurring organic materials
Aluminum(ppb)	1/15/16	1400 (Finished Water=63)		1000	.6	Erosion of natural deposits; residue from some surface water treatment processes

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 Willits* 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
Total Coliform Rule	See Level 1 assessment form below	5-11-16 thru 5-17-16	See description below	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..

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>	(In the year)	N/A	0	(0)	Human and animal fecal waste
Enterococci	(In the year)	N/A	TT	n/a	Human and animal fecal waste
Coliphage	(In the year)	N/A	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**

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)	Alternative Treatment
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 .2 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 1 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	96.4%
Highest single turbidity measurement during the year	0.454 July
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.

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

Summary Information for Operating Under a Variance or Exemption

Summary Information for Federal Revised Total Coliform Rule Level 1 and Level 2 Assessment Requirements

Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct 1 Level 1 assessment. 1 Level 1 assessment was completed. In addition, we were required to take 2 corrective actions and we completed 2 of these actions.

During our routine monthly bacteriological sampling on May 11th and May 13th 2016 the City of Willits experienced 1 routine positive sample and 1 repeat positive sample for Total Coliform bacteria. The City is required to take a minimum of 12 bacteriological samples a month from our approved sampling site location monitoring plan located throughout the distribution system. In this particular case, the sample site (City Parking lot on W. Mendocino and School Street) has a very low usage rate off of the meter as it is designated for landscape irrigation for the planter boxes located inside the parking lot. This meter has been off due to drought conditions and appears to not have been flushed out for a long enough duration to cycle fresh water through the supply pipes. The chlorine residual was 0.93 mg/l which is above our target residual of 0.50-0.80 mg/l respectively. **This incident was isolated to this sample station only**, as we took two additional samples, one upstream and one downstream from the City parking lot sample station in which both came back absent for Total Coliform. This issue has been resolved as of May 17, 2016 with final testing coming back absent for TC at the sample station.