



## City of Manteca

### 2016 Water Quality Report to Consumers

(El informe contiene información importante sobre su agua potable. Tradúzalo o hable con alguien que lo entienda bien.)

The Safe Drinking Water Act requires that utilities issue a water quality report to consumers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. The City of Manteca is committed to providing you with a safe and reliable water supply. Informed consumers are our best allies in maintaining safe drinking water.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (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 must provide the same protection for public health.

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 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) or on the Internet at [www.epa.gov/safewater](http://www.epa.gov/safewater).

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 natural deposits of minerals and 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses.
- Organic chemical contaminants including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.
- Radioactive contaminants, which can be naturally-occurring or resulting from oil and gas production and mining activities.

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* are available from the Safe Drinking Water Hotline (1-800-426-4791).

#### NATIONAL PRIMARY DRINKING WATER REGULATION COMPLIANCE

This report was prepared by City of Manteca Public Works Department staff following prescribed reporting guidelines. For more information, call George Montross at 209-456-8400. En Español, 209-456-8400.

## CURRENT WATER SOURCE

The City of Manteca's water is supplied from two sources. The first is groundwater, pumped from 14 wells located throughout the City, and the second is treated surface water, from Woodward Reservoir, which is purchased from South San Joaquin Irrigation District (SSJID). During the summer of 2005, the City began receiving up to 11,500 acre feet<sup>1</sup>/year of treated surface water from (SSJID). The majority of the City's customers receive a mixture of groundwater and surface water, this mixture changes through out the year. For more specific water source data, contact the Public Works Department at 209-456-8400.

## FUTURE WATER SOURCE

The City of Manteca will continue to supply both groundwater and surface water. In the future, the amount of surface water the City receives may increase by 7,000 acre feet/year and the City will continue to install new groundwater wells.

## SOURCE WATER ASSESSMENT

- Groundwater:

Source water assessments (SWA) were completed in December, 2001 for all existing City wells. New wells have SWA completed prior to the well producing any water for consumption by customers. The wells are considered most vulnerable to confirmed leaking underground storage tanks, gas stations, chemical/petroleum processing/storage facilities, metal plating/finishing/fabricating facilities, automobile body/repair shops and sewer collection systems.

For inquires about the source water assessment call the City of Manteca, Public Works Department at (209) 456-8400 located at 1001 West Center Street, Manteca, CA or the State Board at (209) 948-7696.

- Surface Water:

Source water assessments were completed in September, 2001. The Woodward Reservoir/Stanislaus River source is considered most vulnerable to recreational activities at Woodward Reservoir, confined animal facilities (dairy), cattle grazing, and wastewater disposal. For inquires about the source water assessment call the State Board at (209) 948-7696.

## PUBLIC PARTICIPATION

The public can participate in decisions that affect their water by attending City Council meetings when water related topics are scheduled for action. Council meetings are held in the Council Chambers, 1001 West Center Street, on the first and third Tuesday of every month at 7:00 p.m.

## CONCERNING NITRATE IN OUR WATER

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask for advice from your health care provider.

## CONCERNING ARSENIC IN OUR WATER

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

## LEAD IN WATER

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 Manteca 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>.

## CONTAMINANTS MONITORED

The tables 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. We routinely perform additional monitoring for contaminants that could pose health concerns. The State Board allows us to monitor some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, are more than a year old.

## HOW TO READ THE FOLLOWING TABLES

The column marked "Range of Detected Levels" shows the lowest, average and highest test results in our wells during the most recent monitoring. The "Average Detected Level" is determined from all test results from the most recent monitoring. "Typical Source of Contaminant" indicates where a substance usually originates. Other columns refer to:

- **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.
- **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:** MCLs 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 SDWS do not affect the health at their MCL levels.
- **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- **Regulatory Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Table 1 - Source Water Quality Monitoring**

**Detection of Contaminants with a Primary Drinking Water Standard**

Contaminant	Sample Date	Units	MCL	PHG or (MCLG)	Range of Detected Levels				Typical Source of Contaminant
					Groundwater		Surface Water		
					Average	Range	Average	Range	
Arsenic (1)	2016	ppb	10	0.004	5.1	0 - 8.6	ND	NA	Erosion of natural deposits; runoff from orchards
Barium	2016	ppm	1	2	.2	0.13 - 0.38	ND	NA	Erosion of natural deposits.
Dibromo-chloropropane (DBCP)	2016	ppt	200	1.7	100	0 - 130	NS	NA	Banned nematocide that may still be present in soils due to runoff/leaching from former use on vineyard and fruit trees.
Ethylene Dibromide (EDB)	2016	ppt	50	10	18.7	0 - 43	NS	NA	Banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops.
Fluoride	2016	ppm	2	1	.07	0 - 0.11	ND	NA	Erosion of natural deposits.
Gross Alpha Activity	2016	pCi/L	15	(0)	5.83	5 - 7.1	Sampled 2014 ND	NA	Erosion of natural deposits.
Hexavalent Chromium	2014	ppb	10	0.02	3.6	3.4 - 3.8	ND	NA	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate (2)	2016	ppm as N	10.0	10.0	7.5	0.51 - 10	ND	NA	Runoff and leaching from fertilizer use; erosion of natural deposits.
Uranium	2016	pCi/L	20	0.43	8.9	2.9 - 14	NS	NA	Erosion of natural deposits.

**Detection of Contaminants with a Secondary Drinking Water Standard**

Chloride	2016	ppm	500	None	69	24 - 99	3	NA	Runoff/leaching from natural deposits..
Sulfate	2016	ppm	500	None	31	25 - 41	2.6	NA	Runoff/leaching from natural deposits.

**Sampling Results for Sodium and Hardness**

Sodium	2016	ppm	None	None	42.6	35 - 53	4.3	NA	Naturally occurring in ground and surface waters.
Hardness	2016	ppm	None	None	296	200 - 370	38	NA	Naturally occurring in ground and surface waters.

**Detection of Unregulated Contaminants Sampled in 2016**

Vanadium	2016	ppb	Notification Level 50		25.1	16 - 38.4	ND	NA	Health Effects Language The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Trichloro-propane (1,2,3-TCP)	2016	ppt	5		6.2	0 - 47	ND	NA	Some people who use water containing 1,2,3-trichloropropane in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.

**UNITS USED IN REPORTING**

- ppm = parts per million • ppt = parts per trillion • ND = None Detected • NS = Not Sampled • NA = Not Applicable
- ppb = parts per billion • pCi/L stands for picocuries per liter and is a radioactivity measurement

**Notes from Table 1:**

- (1) Systems with Arsenic levels above 5 ppb (50% of the MCL), but below or equal to 10 ppb (the MCL) must include a specific statement. See Page 2, "Concerning Arsenic In Our Water".
- (2) More than half of the City wells have levels of Nitrates below 5 ppm as N and only require monitoring once every year. Those wells with detected levels of Nitrate between 5 and 10.15 ppm as N are monitored quarterly to maintain an accurate picture of the Nitrate levels. Any well that monitors a level of Nitrate above 10.15 ppm as N would be immediately retested and removed from service if the average of the two tests was above 10.15 ppm as N. Further testing and evaluations would then be performed.

**Table 2 – Distribution System Water Quality Monitoring**

**Sampling Results Showing the Detection of Coliform Bacteria for 2015**

Microbial Contaminants	Highest percentage of positive samples in a month	Number of months in violation	MCL	MCLG	Typical Source of Microbe
Total Coliform Bacteria	1%	0	5% of total monthly samples	0	Naturally present in the environment

**Sampling Results Showing the Detection of Disinfectant Residual and Disinfection By-Products**

Contaminant	Date of Last Test Result	Units	MCL [MRDL ]	PHG (MCLG) [MRDL]	Range of Detected Levels			Typical Source of Contaminant
					Minimum	Average	Maximum	
Chlorine	December 2016	ppm	[4.0]	[4.0]	0.25	0.77	1.73	Drinking water disinfectant added for treatment
TTHMs (Total Trihalomethane)	October 2016	ppb	80	None	8	35	66	By-product of drinking water chlorination.
Haloacetic Acids	October 2016	ppb	60	None	2.7	20.7	40.0	By-product of drinking water chlorination.

**Stage 2 TTHM Monitoring – Locational Running Annual Average**

TTHM MCL	0.080 ppm			
MCL in CCR units	80 ppb			
Location	2016 TTHM Results (ppb)			
	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
Site 1	10	34	21	32
Site 1 LRAA*	26	28	27	14
Site 2	21	53	41	66
Site 2 LRAA*	41	45	46	22
Site 3	8	28	30	40
Site 3 LRAA*	21	22	25	14
Site 4	16	37	34	45
Site 4 LRAA*	19	25	28	19
Site 5	20	61	31	54
Site 5 LRAA*	37	45	43	24
Site 6	16	18	30	32
Site 6 LRAA*	28	30	26	15
Site 7	28	42	42	58
Site 7 LRAA*	38	41	41	28
Site 8	31	46	45	47
Site 8 LRAA*	37	42	43	30

Locational running annual averages for quarters 1 – 3 are based on results from previous quarters not reported on this table.

**Table 2 – Distribution System Water Quality Monitoring (Continued)**

**Stage 2 HAA5 Monitoring – Locational Running Annual Average**

HAA5 MCL	0.060 ppm			
MCL in CCR units	60 ppb			
Location	2016 HAA5 Results (ppb)			
	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
Site 1	16	22	13	16
Site 1 LRAA*	17	19	17	14
Site 2	12	25	20	31
Site 2 LRAA*	26	25	25	22
Site 3	3	18	17	23
Site 3 LRAA*	13	15	15	16
Site 4	11	25	19	21
Site 4 LRAA*	14	17	18	19
Site 5	14	37	18	27
Site 5 LRAA*	25	28	27	24
Site 6	12	15	17	16
Site 6 LRAA*	16	19	18	15
Site 7	22	35	26	28
Site 7 LRAA*	27	30	30	28
Site 8	24	40	28	26
Site 8 LRAA*	26	32	32	30

Locational running annual averages for quarters 1 – 3 are based on results from previous quarters not reported on this table.

**Sampling Results Showing the Detection of Lead and Copper**

Contaminant	Date of Last Test Result	Units	Action Level	MCLG	90 <sup>th</sup> Percentile Level Detected	Number of Sites Exceeding Action Level	Number of Samples Collected	Typical Source of Contaminant
Lead	July 2015	ppb	15	2	1.1	0	35	Internal corrosion of household water plumbing systems; erosion of natural deposits.
Copper	July 2015	ppm	1.3	0.17	0.105	0	35	Internal corrosion of household water plumbing systems; erosion of natural deposits.

**UNITS USED IN REPORTING**

- ppm = parts per million • ppt = parts per trillion • ND = None Detected • NS = Not Sampled • NA = Not Applicable
- ppb = parts per billion • pCi/L stands for picocuries per liter and is a radioactivity measurement
- NTU = Nephelometric Turbidity Unit

**Table 3 – Sampling Results Showing Treatment Of Surface Water Sources**

Treatment Technique (3) (Type of approved filtration technology used)	Ultrafiltration Membrane
Turbidity Performance Standards (4) (that must be met through the water treatment process)	<u>Turbidity of the filtered water must:</u> 1 - Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 - Not to exceed 1.0 NTU any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	0.040 NTU
Number of violations of any surface water treatment requirements	0

**UNITS USED IN REPORTING**

- ppm = parts per million • ppt = parts per trillion • ND = None Detected • NS = Not Sampled • NA = Not Applicable
- ppb = parts per billion • pCi/L stands for picocuries per liter and is a radioactivity measurement
- NTU = Nephelometric Turbidity Unit

**Notes from Table 3:**

- (3) A required process intended to reduce the level of a contaminant in drinking water.
- (4) 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.