

# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2018



***Presented By***  
**City of Tulare**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Este relatório contém a informação importante sobre sua água bebendo. Tenha-o por favor traduzido por um amigo ou por alguém que o compreende e o pode o traduzir para você.



## Our Mission Continues

Once again we present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. As new challenges to drinking water safety emerge, we will remain vigilant in meeting the goals of source water quality by adding treatment where needed, expanding source water protection, upgrading distribution system, promoting water conservation, and furthering community education. We will continually strive to serve the needs of all our water users, and adopt new methods for delivering the best-quality drinking water to the entire community.

Please remember that we are always available should you ever have any questions or concerns about your water.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Important Health Information

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. EPA 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Where Does My Water Come From?

The City of Tulare Water customers enjoy a ground-water supply from 23 city owned and operated wells. The source-water wells are identified by numbers: #1, #8, #11, #12, #13, #14, #15, #17, #22, #26, #27, #31, #33, #34, #35, #36, #37, #38, #39, #40, #42, #44, and #45. Water is pumped by these wells from an area deep beneath the city called the Confined Ground Water System that consists of alluvial sediments below a Corcoran clay layer of the Tulare Lake Basin. Combined, our facilities provide 6 billion gallons of drinking water every year. To learn more about our watershed on the Internet, go to the U.S. EPA Surf Your Watershed Web site at [www.epa.gov/surf/](http://www.epa.gov/surf/).

## Source Water Assessment

A Source Water Assessment was conducted for the City of Tulare in November 2002. At that time, no contaminants were detected in the water supply. However, the water source is considered most vulnerable to the following activities: chemical and petroleum processing, storage, and use; historic gas stations; and high-density septic systems. A copy of the assessment may be viewed at the Water Utility Division Office, 3981 South K Street, Tulare.

## Community Participation

You are invited to participate in our Board of Public Utilities meeting and voice your concerns about your drinking water. We meet the first and third Thursdays of each month, beginning at 4:00 p.m. at the Tulare Library Building, in the City Council Chambers, 475 North M Street, Tulare, California.



## Nitrate Monitoring Violation for Calendar Year 2018

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Pursuant to Title 22, Section 64432.1(a), the water system is required to collect one sample annually for nitrate testing from each source. During the calendar year of 2018, we did not monitor for nitrate from Well 8 and therefore cannot be sure of the quality of your drinking water during that time. As a result of this violation, we have taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

### Substances That Could Be in Water

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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) 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. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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.

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 can result from urban storm-water 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 storm-water runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban storm-water runoff, agricultural applications, and septic systems; Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

### Compliance Order for 1,2,3-TCP MCL Exceedance

Our water system recently failed a drinking water standard. The City of Tulare has levels of 1,2,3 trichloropropane (1,2,3 TCP) above the Drinking Water Standards (MCL) Maximum Contaminant Level. On May 8, 2018, the State Water Resources Control Board, Division of Drinking Water (DDW) issued the City of Tulare a Compliance Order for violating the (1,2,3-TCP) Maximum Contaminant Level. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

**What should I do?** You do not need to use an alternative (e.g., bottled) water supply. This is not an immediate risk.

If it had been, you would have been notified immediately. However, some people who drink water containing 1,2,3-trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer. If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

**What happened?** 1,2,3 TCP was an unregulated contaminant prior to December 14, 2017.

**What is being done?** The City will construct granular activated carbon (GAC) filter systems at six City well sites to remove the contamination. Construction of the filter systems will begin in the summer of 2019. We anticipate completely resolving the problem before May 2021.

We remain vigilant in delivering the best-quality drinking water

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Mr. Tim Doyle, Water Utility Manager, at (559) 684-4324.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule and the water we deliver must meet specific health standards. The information in the data tables shows only those substances that were detected in the water between January 1, 2016 and December 31, 2018. Remember, detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels, and to be in compliance with the State Water Resources Control Board. The State recommends monitoring for certain substances less often than once per year and some substances more frequently. The reasoning is the concentrations of many substances do not change frequently. In these cases, the most recent sample data is included, along with the year it was sampled.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>1,2,3-Trichloropropane</b> [1,2,3-TCP] <sup>1</sup> (ppt)	2018	5	0.7	11	ND–38	Yes	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent
<b>Aluminum</b> (ppm)	2018	1	0.6	0.263	ND–0.73	No	Erosion of natural deposits; residue from some surface water treatment processes
<b>Arsenic</b> <sup>2</sup> (ppb)	2018	10	0.004	8.7	ND–13	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Chlorine</b> (ppm)	2018	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	0.78	ND–2.0	No	Drinking water disinfectant added for treatment
<b>Dibromochloropropane</b> [DBCP] (ppt)	2018	200	1.7	30	ND–110	No	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
<b>Fluoride</b> (ppm)	2018	2.0	1	0.4	ND–1.4	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>HAA5 [Haloacetic Acids]</b> (ppb)	2018	60	NA	8.7	ND–8.7	No	By-product of drinking water disinfection
<b>Gross Alpha Particle Activity</b> (pCi/L)	2018	15	(0)	4.37	ND–6.55	No	Erosion of natural deposits
<b>Nitrate [as nitrogen]</b> (ppm)	2018	10	10	3.8	ND–10	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2018	80	NA	24	ND–24	No	By-product of drinking water disinfection
<b>Uranium</b> (pCi/L)	2018	20	0.43	4.3	ND–6.2	No	Erosion of natural deposits
Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2017	1.3	0.3	0	0/33	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> (ppb)	2017	15	0.2	0	0/33	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

## SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2018	500	NS	13.6	3.5–55	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2018	15	NS	5	5–5	No	Naturally occurring organic materials
Iron (ppb)	2018	300	NS	242	ND–550	No	Leaching from natural deposits; industrial wastes
Odor–Threshold (Units)	2018	3	NS	1.25	ND–1.5	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2018	1,600	NS	292	140–460	No	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	2018	1,000	NS	158	96–260	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2018	5	NS	1.6	0.12–4.3	No	Soil runoff

## UNREGULATED AND OTHER SUBSTANCES<sup>3</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Agressiveness Index (Units)	2016 -2018	11.9	11–13
Alkalinity (ppm)	2016 -2018	82.9	51–140
Bicarbonate (ppm)	2016 -2018	79.9	48–140
Calcium (ppm)	2016 -2018	8.9	1.3–40
Carbonate (ppm)	2016 -2018	13.1	3.3–22
Chloroform (ppb)	2016	1.9	ND–1.9
Hardness (ppm)	2016 -2018	25.4	3.4–130
Hexavalent Chromium <sup>4,5</sup> (ppb)	2018	1.8	ND–2.9
Langelier Index (ppm)	2016 -2018	-1.06	-1.1–0.4
Magnesium (ppm)	2016 -2018	0.98	0.11–4.1
pH (Units)	2016 -2018	8.7	7.9–9.4
Potassium (ppm)	2016 -2018	2.8	2.1–3.9
Sodium (ppm)	2016 -2018	45.2	3.9–100
Sulfate (ppm)	2016 -2018	3.4	9.0–38
tert-Amyl Methyl Ether [TAME] (ppb)	2015	6.5	ND–6.5

<sup>1</sup> In December 2017, 1,2,3-TCP was adopted and moved to the primary standards of regulated substances. Some people who drink water containing 1,2,3-TCP in excess of the MCL and PHG over many years may have the increased risk of getting cancer, based on studies in laboratory animals.

<sup>2</sup> Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.

<sup>3</sup> Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

<sup>4</sup> Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

<sup>5</sup> There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

## SUMMARY INFORMATION FOR VIOLATION OF A MCL, AND A MONITORING AND REPORTING REQUIREMENT

VIOLATION	EXPLANATION	DURATION	ACTIONS TAKEN TO CORRECT THE VIOLATION	HEALTH EFFECTS LANGUAGE
<b>Compliance Order No. 03-24-18R-013</b>	Well Nos. (8, 11, 12, 13, 17, 22, 34, 35, 37, 38, 44) produce water that contains 1, 2, 3-TCP in excess of the maximum contaminant level.	April 2018 to present	The City is constructing GAC Treatment at the affected well sites with anticipated compliance by May of 2021.	Some people who drink water containing 1, 2, 3-trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
<b>Citation No. 03-24-19C-027</b>	We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the calendar year 2018, we did not monitor for nitrate from Well 08 and therefore, cannot be sure of the quality of your drinking water during that time.	2018	Well No. 08 is offline and has been disconnected from the distribution system. It will be properly destroyed at some point in 2019/2020.	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**AL (Regulatory Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**μS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**MCL (Maximum Contaminant Level):** 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 (SMCLs) are set to protect the odor, taste and appearance of drinking water.

**MCLG (Maximum Contaminant Level Goal):** 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. EPA.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG (Public Health Goal):** 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 EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.