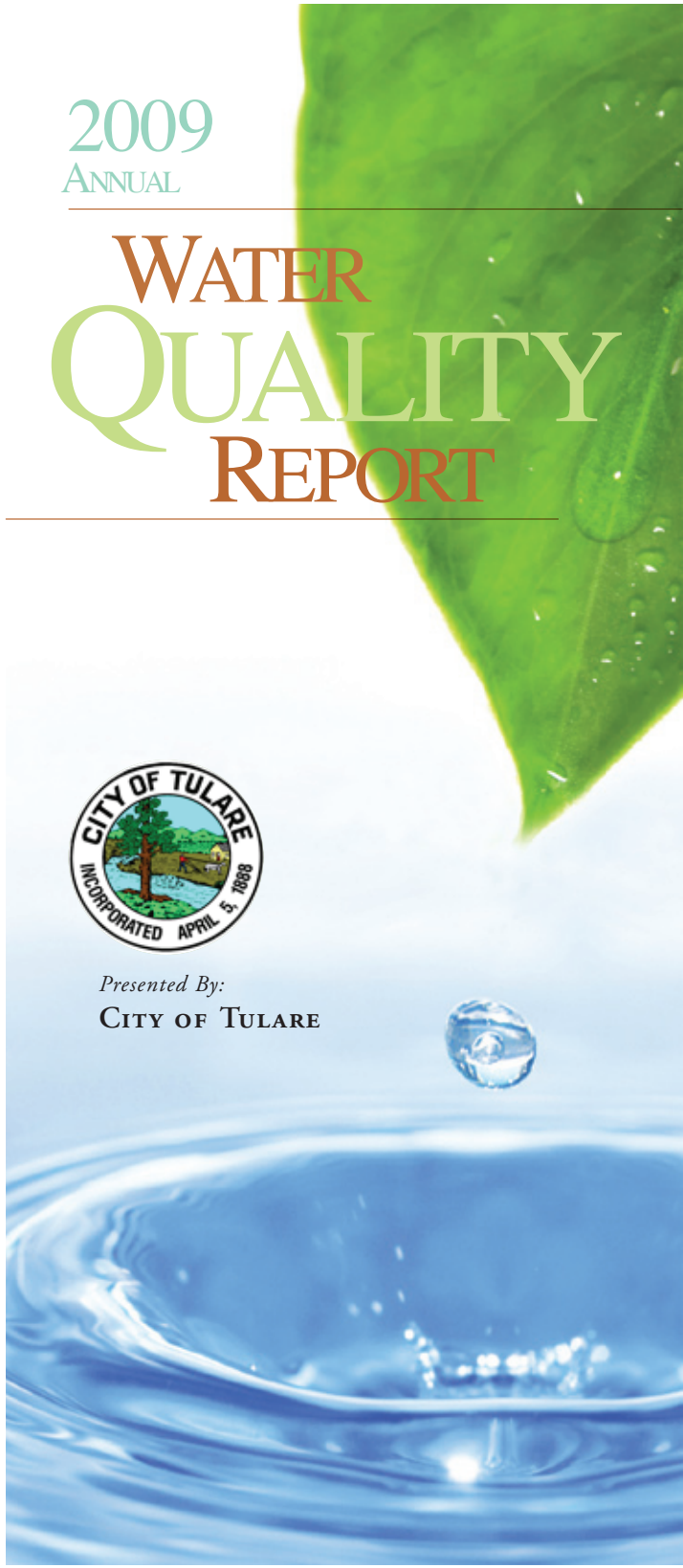


2009  
ANNUAL

WATER  
QUALITY  
REPORT



*Presented By:*  
CITY OF TULARE



## Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2007, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

## Important Health Information

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 [www.epa.gov/safewater/hotline/](http://www.epa.gov/safewater/hotline/).



## Where Does My Water Come From?

The City of Tulare Water customers are fortunate because they enjoy a water supply from 25 City-owned and -operated water wells. Water is pumped from an area called the Confined Ground System, below a Corcoran Clay layer, of the Tulare Lake Basin, deep beneath the city. Combined, our facilities provide roughly 6 billion gallons of clean 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/).

“WHEN THE WELL’S DRY, WE KNOW THE WORTH OF WATER.” — Benjamin Franklin

## Source Water Assessment

A Source Water Assessment was conducted for the City of Tulare in November 2002. No contaminants were detected in the water supply. However, the water source is considered most vulnerable to the following activities: chemical/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 public forum and voice your concerns about your drinking water. We meet the first and third Thursday of each month at 3:00 p.m. at the Civic Affairs Building, 125 South M Street, Tulare, California.

## Lead and Drinking 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. We are 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Questions?

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



## 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 Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department 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.

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 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater 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.



## Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4-6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

## What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, don't use any container with markings on the recycle symbol showing "7 PC" (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

## Should I be concerned about what I'm pouring down my drain?

If your home is served by a sewage system, your drain is an entrance to your wastewater disposal system and eventually to a drinking water source. Consider purchasing environmentally friendly home products whenever possible, and never pour hazardous materials (e.g., car engine oil) down the drain. Check with your health department for more information on proper disposal methods.

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp).

## Sampling Results

During the past three years we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2009	1,000	NA	155	54–650	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2009	10	0.004	4.5	2.1–9.4	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppb)	2009	1,000	NA	177.6	3–420	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2009	2.0	1	0.21	0.10–1.1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2009	15	(0)	2.38	0.15–5.6	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2009	45	45	17.2	2.2–38	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Total Coliform Bacteria [Total Coliform Rule] (% positive samples)	2009	More than 5.0% of monthly samples are positive	(0)	2.2	NA	No	Naturally present in the environment
Uranium (pCi/L)	2009	20	0.43	2.7	1.0–6.1	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community (lead was not detected at the 90th percentile)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	0.3	0.025	0/33	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2009	500	NS	10.02	3.9–44	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2009	15	NS	5	NA	No	Naturally occurring organic materials
Iron (ppb)	2009	300	NS	430	100–1000	No	Leaching from natural deposits; industrial wastes
Odor–Threshold (TON)	2009	3	NS	1	1–1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2009	1,600	NS	224	140–460	No	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	2009	1,000	NS	146	93–270	No	Runoff/leaching from natural deposits

UNREGULATED AND OTHER SUBSTANCES			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Aggressiveness Index (Units)	2009	11.9	11–12
Bicarbonate (ppm)	2009	88	52–200
Bromoform (ppb)	2009	99.9	92–110
Calcium (ppm)	2009	13.2	1.8–49
Magnesium (ppm)	2009	0.95	0.22–4.9
pH (Units)	2009	8.5	7.9–9.5
Potassium (ppb)	2009	3	2.1–6.4
Sodium (ppm)	2009	34.5	20–95
Total Alkalinity (ppm)	2009	79.5	58–150
Total Hardness (ppm)	2009	50.8	2.8–140

## Definitions

**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.

**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.

**NS:** No standard.

**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).

**TON (Threshold Odor Number):** A measure of odor in water.