ANNUAL WATER QUALITY REPORT

Water testing performed in 2008

City of Tulare
Agri-Center Of The World

PWS ID#: 5410015

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.

Important Health Information

Some people may be more vulnerable than the general population to contaminants in drinking water. 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 from their health care providers about drinking water. U.S. EPA and 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.

Community Participation

You are invited to participate in our public forum and to voice your concerns about your drinking water. We meet beginning at 3:00 p.m. on the first and third Thursday of each month at the Civic Affairs Building, 125 South M Street, Tulare, California.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you could save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Where Does My Water Come From?

The City of Tulare water customers are fortunate because they enjoy a water supply from 27 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.

Information on the Internet

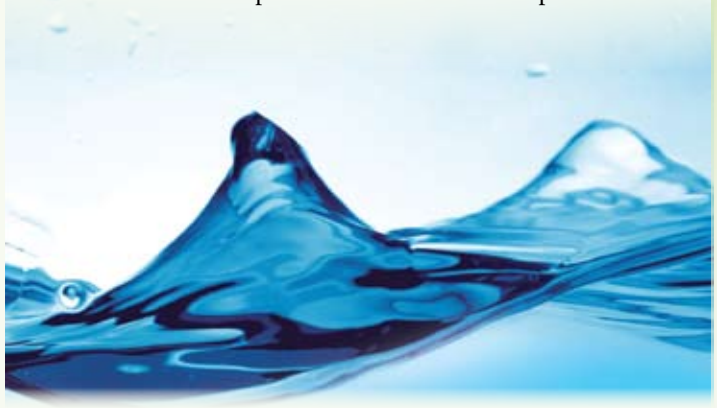
The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management has a Web site (www.dhs.ca.gov/ps/ddwem/technical/dwp/dwpindex.htm) that provides complete and current information on water issues in California, including valuable information about our watershed.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is the total volume of freshwater used to produce the goods and services that an individual or community consumes or that a business provides. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; that is twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org, or visit www.waterfootprint.org to see how the water footprints of other nations compare.



Questions?

For more information about this report, or for any questions relating to your drinking water, please call Dan Boggs, Water Utility Superintendent, 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, which 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.

What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at www.epa.gov/safewater/crossconnection.html. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

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.

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.

Sampling Results

During the past year, 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. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present 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)	2006–2008	1,000	600	101.3	0.066–650	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic[1] (ppb)	2006–2008	10	0.004	4	2.1–10	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppb)	2006–2008	1	2	40.5	10–70	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Combined Radium (pCi/L)	2006–2008	5	(0)	1	1–1	No	Erosion of natural deposits
Dibromochloropropane [DBCP] (ppb)	2006–2008	200	1.7	0.84	0.013–0.79	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
Fluoride (ppm)	2006–2008	2.0	1	0.168	0.01–1.1	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2006–2008	15	(0)	2.1	2–2.25	No	Erosion of natural deposits
Mercury [inorganic] (ppb)	2006–2008	2	1.2	0.21	NA	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nitrate [as nitrate] (ppm)	2006–2008	45	45	16.9	2.2–38	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Xylenes (ppm)	2006–2008	1.750	1.8	0.275	0.05–0.5	No	Discharge from petroleum and chemical factories; fuel solvent

Tap water samples were collected for lead and copper analysis from sample sites throughout the community (lead was not detected)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2008	1.3	1.3	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)	2006–2008	500	NS	10.2	4–30	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2006–2008	15	NS	4.3	1–10	No	Naturally occurring organic materials
Foaming Agents [MBAS] (ppb)	2006–2008	500	NS	50	NA	No	Municipal and industrial waste discharges
Iron (ppb)	2006–2008	300	NS	131.8	10–280	No	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2006–2008	50	NS	5.1	NA	No	Leaching from natural deposits
Odor–Threshold (TON)	2006–2008	3	NS	1	1–1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2006–2008	1,600	NS	216.5	130–340	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2006–2008	500	NS	10.4	4.5–32	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2006–2008	1,000	NS	143.9	86–220	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2006–2008	5	NS	1.1	0.04–7.7	No	Soil runoff
Zinc (ppm)	2006–2008	5.0	NS	3.75	0.26–5.7	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1,2,3-Trichloropropane (ppb)	2006–2008	0.275	0.05–0.5
Aggressiveness Index (ppm)	2006–2008	11.66	11–12
Bicarbonate (ppm)	2006–2008	74.9	13–120
Bromoform (ppb)	2006–2008	110	100–120
Calcium (ppm)	2006–2008	12	1–39
Carbonate (ppm)	2006–2008	9.9	1.6–39
Hydroxide (ppm)	2006–2008	1	1–1
Magnesium (ppm)	2006–2008	0.85	0.01–2
Potassium (ppm)	2006–2008	2.1	1–6.4
Sodium (ppm)	2006–2008	33.48	20–78
Total Alkalinity (CaCO3) (ppm)	2006–2008	74.69	55–130
Total Hardness (CaCO3) (ppm)	2006–2008	33.48	20–78

Footnotes:

[1] While your drinking water meets the EPA 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.

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 level of a disinfectant added for water treatment that may not be exceeded at the customers tap.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. EPA.

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).

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

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.