

## Important Health Information

Some people may be more vulnerable than others 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 can 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) 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.

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## Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

Conservation measures you can use inside your home:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.



You can conserve outdoors as well:

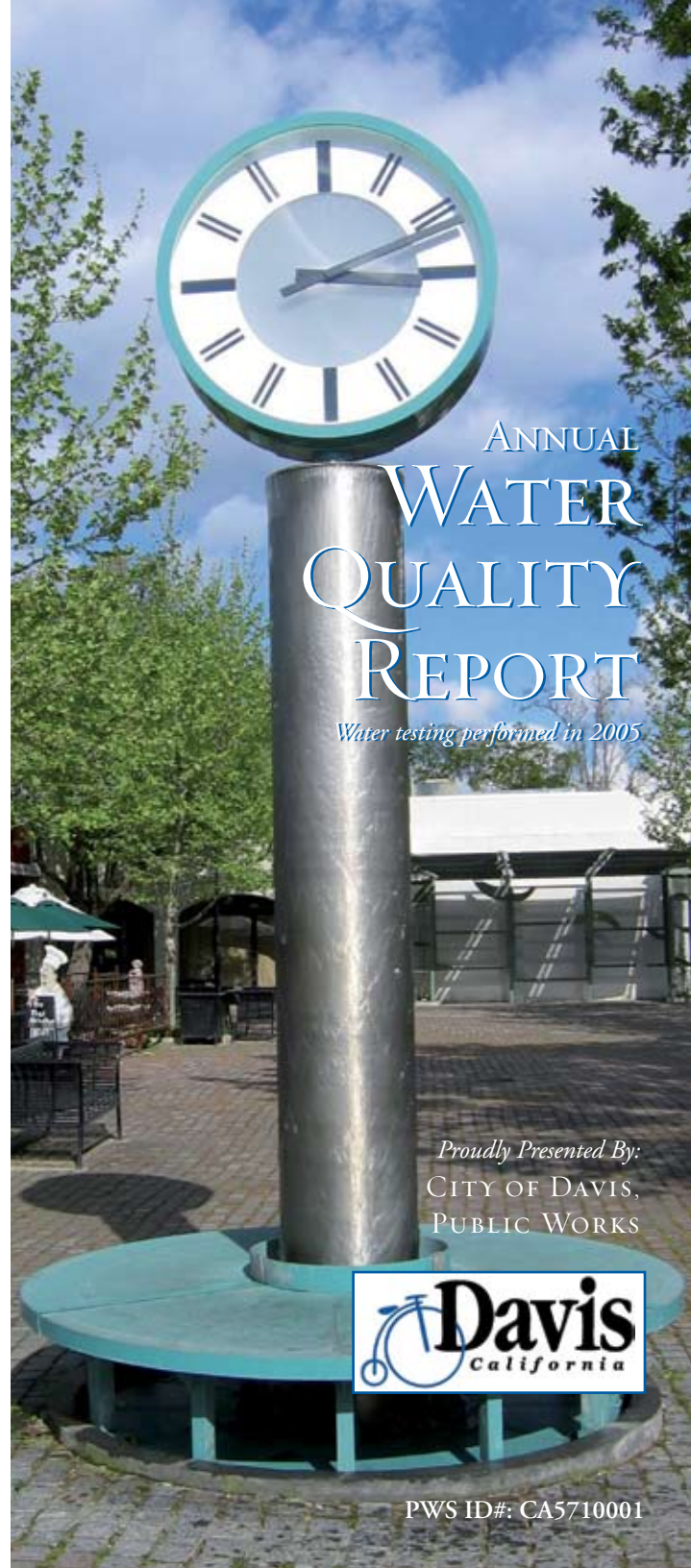
- Water the lawn and garden in the early morning or evening.
- Adjust your automatic sprinkler controller to avoid runoff.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.

Information on other ways that you can help conserve water can be found at [www.epa.gov/safewater/publicoutreach/index.html](http://www.epa.gov/safewater/publicoutreach/index.html).

City of Davis, Public Works  
1717 Fifth Street  
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*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.*

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# ANNUAL WATER QUALITY REPORT

*Water testing performed in 2005*

Proudly Presented By:  
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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.

**Radioactive Contaminants**, which can be naturally occurring or can be the result of oil and gas production and mining activities.

**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;

**Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Substances that may be present in source water include:

substances. The presence of contaminants does not necessarily indicate that water poses a health risk. health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some regulations also establish limits for contaminants in bottled water, which must provide the same protection for public prescribe regulations that limit the amount of certain substances in water provided by public water systems. Department) In order to ensure that tap water is safe to drink, the U.S. EPA and the State Department of Health Services (Department) animals or from human activity.

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

## Substances That Might Be in Drinking Water

An assessment of the drinking water source for the City of Davis was completed in 2002. This assessment was done in compliance with the California Department of Health Services Source Water Assessment Program, the goal of which is to determine the water system's vulnerability to possible sources of contamination. The assessment determined that our groundwater is most vulnerable to historic and present-day land use activities, including agriculture, the historic use of septic systems, and past practices of dry cleaners, gas stations and light industry. Additionally, the water source is vulnerable to naturally occurring contaminants such as selenium and chromium. Overall, there is a slight to moderate threat that the city's water source could become contaminated by these land use patterns and activities. A copy of the complete assessment is available online at <http://swap.ice.ucdavis.edu>. TSiinfo/TSintro.asp, or contact Marie Graham at (530) 757-5686 or e-mail [mgraham@cityofdavis.org](mailto:mgraham@cityofdavis.org).

## Where Does Our Water Come From?

Davis draws water from 21 wells located throughout the city. The wells tap into aquifers beneath the city at depths from 300 to 1,800 feet below the ground. The water does not pass through a central treatment or distribution facility, but it is filtered naturally by the sand and gravel it passes through in the aquifers.

The only treatment administered is the addition of chlorine (sodium hypochlorite) for disinfection. The 0.4 parts per million dosage is typical of water systems throughout the country. Precautions should be taken when using chlorinated water for medical uses such as in dialysis machines or when adding water to fish tanks or ponds.



In addition to the water quality: wells are operating. The weighted averages are intended to be an indication of the overall water quality.

This report is prepared in accordance with the U.S. Environmental Protection Agency (U.S. EPA) and California regulations under the Safe Drinking Water Act (SDWA) requiring water utilities to provide detailed water quality information to their customers annually. The table contains water-testing results from 2005. This publication also includes information about where your water comes from, what it contains, and how it compares to state and federal standards.

The amounts reported in the table as "weighted averages" are based on recent water analyses for each well with respect to how much water the well contributed to the system during 2005. The weighted averages may not be representative of water at a specific point in the system since there is a constant mixing of water in the system depending on which wells are operating.

The weighted averages reported, approximately 100 other substances were checked with no measurable amounts found.

**Contact Us**  
For more information about this report, or for any questions relating to your drinking water, please call Davis Public Works at (530) 757-5686 or e-mail [bschoech@cityofdavis.org](mailto:bschoech@cityofdavis.org). The city conducts public meetings and workshops concerning various water issues. The city council receives public comments at their regular meetings, which are held a few times a month. Check the city's Web site at [www.cityofdavis.org](http://www.cityofdavis.org) for the schedule of meetings or for more water information.

## What Does Our Water Contain?

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. 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.

PRIMARY DRINKING WATER STANDARD (Regulated In Order To Protect Against Possible Adverse Health Effects)							
SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	PHG (MCLG)	WEIGHTED AVERAGE	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2005	50	0.004	4.4	ND-6	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2005	1	2	<0.10	ND-0.19	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb)	2005	50	(100)	14	2-60	No	Discharge from steel and pulp mills and from chrome plating; erosion of natural deposits
Fluoride (ppm)	2005	2.0	1	0.23	ND-0.5	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha particle Activity (pCi/L)	2002	15	(0)	2.7	0.49-7.29	No	Erosion of natural deposits
Gross Beta particle Activity (pCi/L)	2002	50	(0)	1.9	ND-4.15	No	Decay of natural and manmade deposits
Nickel (ppb)	2005	100	12	<10	ND-11	No	Erosion of natural deposits; discharge from metal factories
Nitrate (as nitrate, NO <sub>3</sub> ) (ppm)	2005	45	45	11	ND-47	No	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	2005	50	(50)	7.2	ND-45	No	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TCE [Trichloroethylene] (ppb)	2005	5	0.8	<0.50	ND-0.63	No	Discharge from metal degreasing sites and other factories
Total Coliforms (% positive samples)	2005	5% positive monthly samples	(0)	5.1	NA	Yes	Naturally present in the environment
TTHMs [Total Trihalomethanes] (ppb)	2005	80	NA	<6.5	ND-6.5	No	By-product of drinking water chlorination

Tap water samples were collected for lead and copper analyses from 30 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	ACTION LEVEL	PHG (MCLG)	AMOUNT DETECTED (90TH% TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2005	1.3	0.17	0.29	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2005	15	2	2.5	0	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY DRINKING WATER STANDARD (Regulated In Order To Protect The Odor, Taste And Appearance Of Drinking Water)							
SUBSTANCE (UNITS)	YEAR SAMPLED	SMCL	PHG (MCLG)	WEIGHTED AVERAGE	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2005	500	NS	49	13-160	No	Runoff/leaching from natural deposits; seawater influence
Copper (ppm)	2005	1.0	NS	<0.05	ND-0.25	No	Leaching from natural deposits; discharge from mining and industrial waste; leaching from copper pipes
Manganese (ppb)	2005	50	NS	12	ND-70	No	Leaching from natural deposits
Specific Conductance (µmhos/cm)	2005	1,600	NS	860	500-1,500	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2005	500	NS	70	24-260	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids [TDS] (ppm)	2005	1,000	NS	525	300-970	No	Runoff/leaching from natural deposits
Turbidity (Units)	2005	5	NS	<0.5	ND-0.5	No	Soil runoff
Zinc (ppm)	2005	5.0	NS	<0.050	ND-0.07	No	Runoff/leaching from natural deposits; industrial wastes

UNREGULATED AND OTHER SUBSTANCES			
SUBSTANCE (UNITS)	YEAR SAMPLED	WEIGHTED DETECTED	RANGE LOW-HIGH
Boron (ppb)	2005	759	470-1,100
Bromodichloromethane (ppb)	2005	<0.50	ND-0.6
Bromoform (ppb)	2005	<0.50	ND-3.8
Bromomethane (methyl bromide) (ppb)	2005	<0.50	ND-1.1
Calcium (ppm)	2005	34	16-63
Chloroform (ppb)	2005	<0.50	ND-1.7
Dibromochloromethane (ppb)	2005	<0.50	ND-0.8
Hardness as CaCO <sub>3</sub> (ppm)	2005	313	100-620
Magnesium (ppm)	2005	56	15-120
Methyl Chloride (ppb)	2005	<0.50	ND-1.9
pH (Units)	2005	8.2	7.8-8.3
Potassium (ppm)	2005	0.9	ND-3
Radon 222 (pCi/L)	2005	331	187-496
Sodium (ppm)	2005	85	54-120

### About Our Violation

During February 2005, 78 bacteriological samples were collected from the Davis/El Macero water distribution system. Four of these samples, or 5.1%, were positive for coliform bacteria and the drinking water standard was not met for the month. Additional samples were analyzed and found to be free of coliform bacteria. 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. The California Department of Health Services required us to issue a Public Notice of this failure, which was included in the 2004 Annual Water Quality Report and in the Davis Enterprise.

## Table Definitions

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

**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 consumer's 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. Environmental Protection Agency.

**NA:** Not applicable

**ND:** Not detected

**NS:** No standard

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

**PDWS (Primary Drinking Water Standard):** MCLs 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).

**µmhos/cm (micromhos per centimeter):** A measure of electrical conductance.



### Radon

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Radon is released into homes and groundwater from soil. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. Samples taken from our wells during 2005 indicated an average radon concentration of 331 picocuries per liter (pCi/L). If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information call (800) SOS-RADON.