



## To Our Water Customers

This report was 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. It is a snapshot of testing done in 2003 and includes information about where your water comes from, what it contains, and

how it compares to state and federal standards.

The substance amounts reported in the table as "weighted average" are based on recent water analysis results for each well with respect to how much water the well contributed to the system during the year. The weighted average 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 are intended to be an indication of water quality in the overall system.

In addition to the substances reported, approximately 100 other substances were checked with no measurable amounts found.

## Contact Us

For more information about this report or any questions related to your drinking water, please call Davis Public Works at (530) 757-5686 or e-mail [bschoech@ci.davis.ca.us](mailto:bschoech@ci.davis.ca.us).

The city periodically conducts public meetings and workshops concerning water issues. Call us if you would like to be added to our contact list. The city council receives public comments at their regular meetings, which are held several times a month.

Check the City of Davis' Web site at [www.cityofdavis.org](http://www.cityofdavis.org) for the schedule of meetings or for more water information.

## Where Does Our Water Come From?

Davis draws water from 20 wells located throughout the city. The wells tap into aquifers beneath the city at depths from 300 to 1,800 feet below ground. The water does not pass through a central treatment or distribution facility, but rather 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 0.2 parts per million dose is typical of water systems throughout the country. Precautions should be taken when using chlorinated water for medical uses, such as dialysis machines, or when adding water to fish tanks or ponds.



## Source Water Assessment

An assessment of the drinking water source for the city was completed in December 2002. This assessment was done in compliance with the 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 for 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/TSinfo/TSintro.asp>, or at the City of Davis Public Works Office, or contact Marie Graham at (530) 757-5686 or e-mail [mgraham@ci.davis.ca.us](mailto:mgraham@ci.davis.ca.us).

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

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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).

- You can conserve outdoors as well:**
- Water the lawn and garden in the early morning or evening.
  - 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.
- Conservation measures you can use inside your home include:**
- 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.

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 also can save you money by reducing your water bill. Here are a few suggestions:

**Water Conservation Tips**

## 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. 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.

### 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)	2003	50	NA	4.3	ND-6	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2003	1	2	0.11	ND-0.19	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb) <sup>1</sup>	2003	50	(100)	22	4-56	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2003	2	1	0.21	ND-0.4	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	NA	2.9	0.49-7.08	No	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	2002	50	NA	1.8	ND-4.15	No	Decay of natural and man-made deposits
Nitrate [as nitrate, NO <sub>3</sub> ] (ppm)	2003	45	45	15	16-38	No	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	2003	50	(50)	7.4	ND-34	No	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Total Coliforms (% positive samples)	2003	5% positive samples	(0)	1.3	NA	No	Naturally present in the environment
Trichloroethylene [TCE] (ppb)	2003	5	0.8	<0.50	ND-0.59	No	Discharge from metal degreasing sites and other factories

### 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 (90 <sup>th</sup> % TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2003	1.3	0.17	0.27	0	No	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2003	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)	2003	500	NS	50	13-160	No	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2003	50	NS	17.2	ND-100	No	Leaching from natural deposits
Specific Conductance (µmhos/cm)	2003	1,600	NS	906	480-1,500	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2003	500	NS	66	23-240	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids [TDS] (ppm)	2003	1,000	NS	541	290-1,000	No	Runoff/leaching from natural deposits

## Substances Commonly Found in Drinking 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.

To ensure that tap water is safe to drink, the U.S. EPA and the California Department of Health Services (CDHS) prescribe regulations that limit the amount of certain substances in water provided by public water systems. CDHS 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 substances. The presence of contaminants does not necessarily indicate that water poses a health risk.

Substances 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 stormwater 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, 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, and septic systems;

**Radioactive Contaminants**, which 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.



## 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 (SMCL) 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.

**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.

## UNREGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	WEIGHTED AVERAGE	RANGE (LOW-HIGH)
Boron (ppb)	2003	734	500-1100
Calcium (ppm)	2003	37	19-64
Chloroform (ppb)	2003	<0.50	ND-2.4
Hardness (ppm)	2003	352	110-650
Magnesium (ppm)	2003	63	16-120
pH (Units)	2003	8.1	7.7-8.4
Potassium (ppm)	2003	0.9	ND-3.0
Radon (pCi/L)	1999	345	224-553
Sodium (ppm)	2003	77	45-110

<sup>1</sup>Quarterly sampling is required on wells that exceed one-half of the MCL. These results are averaged with the results from the previous three quarters. Allergic dermatitis is a possible health effect for some people who use water containing chromium in excess of the MCL over many years.

## 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 water source during 1999 indicated an average radon concentration of 345 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.