



*Annual*  
**WATER**  
**QUALITY**  
**REPORT**

*Reporting Year 2012*

*Presented By*



**City of Woodland**

Anualmente la Ciudad de Woodland distribuye un informe a todos los clientes sobre la calidad y el contenido del agua potable para asegurarle que el agua potable es limpia y saludable para beber. Para ver la versión del informe en español por favor visite la página de Internet [www.cityofwoodland.org](http://www.cityofwoodland.org) y entre a las secciones: Homepage > Government > Departments > Public Works > Issues & Information > 2012 Water Quality Report.

PWS ID#: 5710006

## 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 California 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.

## Water Conservation

Join with the City of Woodland in conserving water to meet the state goal of a 20 percent reduction in water consumption by 2020. With increasing demands on our groundwater aquifer, it is more important than ever to conserve water both to help the environment and to save money. Up to 70 percent of water usage in the Sacramento Valley is for landscaping. As the summer approaches, check your irrigation system for leaks, and consider installing a weather-based irrigation controller and replacing some of your turf with low-water-use plants. For more information on home and landscape water conservation and/or to request a water-wise kit and water conservation devices, go to [www.cityofwoodland.org/waterconservation](http://www.cityofwoodland.org/waterconservation).

## Protect Your Water Supply— Prevent Pollution of Runoff

Unlike sanitary sewer flows, stormwater and other urban runoff is not treated before it is released to local waterways. Polluted runoff can affect drinking water sources. This, in turn, can affect human health and increase drinking water costs. Please help protect the water supply. Keep chemicals, soaps, and auto fluids out of gutters and storm drains. Minimize the use of fertilizers and pesticides that can wash off and pollute streams or seep into groundwater supplies.

## Source Water Assessment

The California Department of Public Health requires water providers to conduct a source water assessment (SWA) to help protect the quality of future water supplies. The SWA describes where a water system's drinking water comes from, the type of polluting activities that may threaten source water quality, and an evaluation of the water's vulnerability to those threats. The assessment for the City of Woodland's water was completed in December of 2002. It found that our groundwater is most vulnerable to present-day land use activities, including agriculture, use of septic systems, gas stations, dry cleaners, and historical contamination plumes from these sources. A copy of the complete assessment report is available at <http://swap.ice.ucdavis.edu/TInfo/TSources.asp?mySystem=5710006>.

## To Our Water Customers:

The City of Woodland is pleased to provide you with its 2012 annual water quality report. This report is required by state law and designed to inform you about the quality of the water that is provided to you. The language in portions of this report is also state mandated.

The City of Woodland is dedicated and committed to providing our customers with the highest-quality drinking water available. We are pleased to announce that the City of Woodland's water supply meets or exceeds all federal and state standards. Our goal is to continue to provide a safe and dependable supply of drinking water.

Under the guidelines provided by the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (CDPH), the City of Woodland monitors and tests the drinking water from source to tap. Before water reaches your tap, hundreds of these tests have been performed to detect more than 80 different kinds of contaminants and ensure that your water meets all regulatory requirements for health standards.

In addition to the substances reported, we tested for 100 other substances and no measurable amounts were found. We hope this report will provide the answers to any questions you may have about the drinking water supplied by the City of Woodland.

## 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 <http://water.epa.gov/drink/hotline>.



## Get Involved

The City of Woodland periodically conducts public meetings and workshops concerning water issues. The Woodland City Council receives public comments at their regular meetings, which are held on the first and third Tuesdays of each month. For more information, please call the Secretary to the City Manager at (530) 661-5800 or go to <http://www.cityofwoodland.org/gov/cityhall/council/default.asp>.

## 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 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).

## Where Does Your Water Come From?

Woodland's water supply is pumped from 18 operational groundwater wells located throughout the city to its distribution pipe system. Groundwater comes from rain that seeps down through the soil until it reaches an impermeable layer. Woodland's water does not pass through a central water treatment facility but is filtered naturally by the sand and gravel as it passes through the aquifers. This is standard practice in well water systems.

The only treatment administered is the addition of liquid chlorine (sodium hypochlorite) at the wells, for disinfection. The 0.3 to 0.5 parts per million dosage is typical of water systems throughout the country. Caution should be taken when using chlorinated water for medical uses such as for dialysis machines or when adding water to fish tanks or ponds.

For water-quality reasons, the City is planning on receiving winter water and most of its summer water from the Sacramento River by approximately 2016.

## CONTACT Us

For more information about this report, or for any questions relating to your drinking water, please phone the Woodland Public Works Department at (530) 661-5962 or email [pubworks@cityofwoodland.org](mailto:pubworks@cityofwoodland.org).

Para más información acerca del reporte o si tiene preguntas acerca del agua potable por favor llame al Departamento de Obras Públicas de la Ciudad de Woodland al (530) 661-5962 o envíe un correo electrónico a [pubworks@cityofwoodland.org](mailto:pubworks@cityofwoodland.org).

Property owners, please share this information with your tenants!

## How Hard Is My Water?

A concentration of 17.1 parts per million (ppm) of hard water is equal to 1 grain per gallon. Woodland's water can be as high as 420 ppm, which equals about 24.6 grains per gallon. Water hardness does not affect a person's health but may not be aesthetically pleasing. Over time, water hardness leaves mineral deposits in pipes, fixtures, and equipment that may impact their life expectancy. (See table.)



## Surface Water Project Will Improve Water Quality

Improved water quality starts with a better water source. Although our groundwater supply meets all current drinking water regulations and is safe to use and drink, the water leaving our homes is not considered safe to return to the environment. Our wastewater contains high levels of selenium and salts, among other things. State and federal water/wastewater quality regulations are becoming stricter. The City will not be able to comply with future regulations using groundwater alone. For that reason, the City is moving forward with a surface water supply project to largely replace groundwater supplies. The project will deliver high-quality, treated water from the Sacramento River as the City's main drinking water supply starting in 2016. Water will be softer, easier on water-using appliances, and meet current and future state and federal water/wastewater quality regulations.

The Woodland-Davis Clean Water Agency (WDCWA)—a joint powers authority of the Cities of Woodland and Davis—was formed in 2009 to finance, build, and operate a regional surface water supply project. The project includes:

- 1) Water intake structure on the Sacramento River
- 2) Pipelines from the intake structure to the water treatment facility
- 3) Regional water treatment facility
- 4) Pipelines from the water treatment facility to Woodland and Davis
- 5) Other repairs and updates to the Cities' existing local water systems

Construction is slated for 2014–2016. The facilities should be fully operational in 2016. The WDCWA is aggressively seeking state and federal funding to minimize the need for rate increases to support the project. For more information, visit [www.wdcwa.com](http://www.wdcwa.com), or call (530) 757-5673.

## What Does Our Water Contain?

Before we deliver water to your homes, we take many steps to ensure its safety. During the past year, we have taken hundreds of water samples in order to determine the presence of any inorganic, biological, radioactive, volatile organic, or synthetic organic constituents. In response to your concerns, we regularly collect and test other samples from the water sources, the distribution system, and customers' homes. The tables below show only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we believe 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 often 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 PRIMARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AVERAGE	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Arsenic</b> <sup>1</sup> (ppb)	2012	10	0.004	2	ND–11	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Barium</b> (ppm)	2012	1	2	0.23	0.16–0.29	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Chromium</b> (ppb)	2012	50	(100)	17	ND–29	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
<b>Fluoride</b> (ppm)	2012	2.0	1	0.14	0.12–0.16	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate [as Nitrate]</b> <sup>2</sup> (ppm)	2012	45	45	25	ND–40	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Nitrate + Nitrite [as N]</b> (ppb)	2012	10,000	10,000	6,050	4,600–7,000	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Selenium</b> (ppb)	2012	50	30	5	ND–22	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
<b>TTHMs [Total Trihalomethanes]–Stage 1</b> (ppb)	2012	80	NA	3.5	2.3–4.7	No	By-product of drinking water disinfection

### Distribution System Lead and Copper (Tap water samples were collected from 72 homes in 2010.)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	PHG (MCLG)	90TH %TILE	SITES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2010	1.3	0.3	0.33	0	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> (ppb)	2010	15	0.2	ND	2	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

### REGULATED SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AVERAGE	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chloride</b> (ppm)	2012	500	NS	76	57–98	No	Runoff/leaching from natural deposits; seawater influence
<b>Iron</b> (ppb)	2012	300	NS	7	ND–51	No	Leaching from natural deposits; industrial wastes
<b>Specific Conductance</b> (µS/cm)	2012	1,600	NS	936	740–1,000	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2012	500	NS	36	30–44	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2012	1,000	NS	532	420–600	No	Runoff/leaching from natural deposits

## UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AVERAGE	RANGE LOW-HIGH
Bicarbonate (ppm)	2012	328	260–390
Calcium (ppm)	2012	63	35–77
Carbonate (ppm)	2012	2	ND–12
Chromium VI [Hexavalent Chromium] (ppb)	2012	18	5–28
Hardness (as CaCO <sub>3</sub> ) (ppm)	2012	347	190–420
Magnesium (ppm)	2012	46	26–56
pH (Units)	2012	8.2	8.1–8.4
Potassium (ppm)	2012	2.5	2.2–2.9
Sodium (ppm)	2012	66	56–89
Total Alkalinity (ppm)	2012	330	270–390

<sup>1</sup> Arsenic was detected over the MCL in one well in July. The well was immediately removed from service. Some people who drink water containing arsenic in excess of the EPA MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.

<sup>2</sup> Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should ask advice from your health care provider.

## Definitions

**AL (Regulatory Action Level):** The concentration of a contaminant that, 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

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

**NS:** No standard

**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).