

# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2018



***Presented By***  
**City of Woodland**



## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

## Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) websites 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 website (<https://goo.gl/kGepu4>) that provides complete and current information on water issues in California, including valuable information about our watershed.

## Source Water Assessment

The State Water Resources Control Board Division of Drinking Water 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 surface water assessment for the Sacramento River identified agricultural drainage, livestock, recreation, urban runoff, industrial discharge, wastewater facilities, and watershed spills as potential contaminating activities. The 2015 Sacramento River Watershed Sanitary Survey Report is available from the City of Woodland website: <http://www.cityofwoodland.org/DocumentCenter/View/1069/Westside-Sacramento-Integrated-Regional-Water-Management-Plan-PDF>.

The groundwater assessment for the City of Woodland was completed in December 2002 and updated for new well construction. Our groundwater is most vulnerable to present-day land use activities, including agriculture, use of septic systems, gas stations, and dry cleaners, and historical contamination plumes from these sources. A copy of the complete assessment report is available from the City of Woodland website: <http://www.cityofwoodland.org/DocumentCenter/View/1575/Drinking-Water-Source-Assessment-PDF>.

## 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>.





## 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 Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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 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 defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. 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 1 quart of milk, and 4,200 gallons of water are required to produce 2 pounds of beef.

According to the U.S. EPA, the average American uses over 180 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, twice the global per capita average. With water use increasing sixfold 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 <http://goo.gl/QMoIXT>.

## 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!



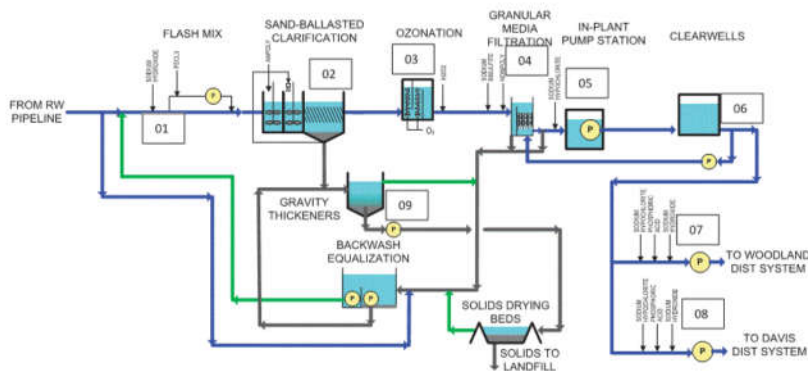
*"We remain vigilant in delivering the best-quality drinking water"*

## Where Does Your Water Come From?

The City of Woodland has two sources of drinking water: surface water (primary supply) and groundwater (backup supply).

Surface water is pumped from the Sacramento River to the Woodland-Davis Clean Water Agency's (WDCWA) Regional Water Treatment Facility (RWTF) for various treatment processes (see diagram) and the addition of chlorine (for disinfection) prior to distribution. For more information about the RWTF, visit <http://www.wdcwa.com/>. Surface water is also stored below ground in the city's three aquifer storage and recovery wells for use in summer months to supplement WDCWA-supplied water.

### Surface Water Treatment Process



### Groundwater Treatment Process

If additional supply is needed, the city can pump groundwater from five immediately operational wells located throughout the city to the distribution pipe system. Water from three of the wells is blended with surface water prior to reaching any customers and prioritized over the well water sent directly into the distribution system. Groundwater comes from rain that seeps down through the soil until it reaches an impermeable layer. The water is filtered naturally by sand and gravel as it passes into 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 city maintains six additional wells as a further backup water source.

## 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).





## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring 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.

We participated in the fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2018	1	2	0.022	NA	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Bromate (ppb)	2018	10	0.1	0.1	ND–1.3	No	By-product of drinking water disinfection
Chlorine (ppm)	2018	[4.0 (as Cl2)]	[4 (as Cl2)]	0.8	0.8–0.9	No	Drinking water disinfectant added for treatment
Control of DBP precursors [TOC] (ppm)	2018	TT	NA	0.96	0.77–1.3	No	Various natural and man-made sources
Haloacetic Acids (ppb)	2018	60	NA	14.3	ND–25	No	By-product of drinking water disinfection
Hexavalent Chromium (ppb)	2018	NS <sup>1</sup>	0.02	0.33	NA	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate [as nitrogen] (ppm)	2018	10	10	ND	NA	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	24.8	6.6–26	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.07	0/60	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	ND	0/60	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2018	500	NS	17	NA	No	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2018	50	NS	ND	NA	No	Leaching from natural deposits
Sulfate (ppm)	2018	500	NS	5.5	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2018	1,000	NS	136	96–180	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2018	5	NS	0.03	0.03–0.07	No	Soil runoff
UNREGULATED AND OTHER SUBSTANCES <sup>2</sup>				SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
				Calcium (ppm)	2018	14	9–17
				Chlorate (ppb)	2018	130	78–220
				Hardness, Total [as CaCO3] (ppm)	2018	63	45–93
				Magnesium (ppm)	2018	7.2	NA
				pH (Units)	2018	7.9	7.9–7.9
				Sodium (ppm)	2018	19	NA

## UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bromochloroacetic acid	2018	1.6	0.39 - 2.4
Bromodichloroacetic acid	2018	1.4	0.52 - 2.1
Chlorodibromoacetic acid	2018	0.70	ND - 1.1
Dibromoacetic acid	2018	0.92	ND - 3.0
Dichloroacetic acid	2018	2.4	0.72 - 3.9
Trichloroacetic acid	2018	2.0	0.63 - 15

<sup>1</sup>There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

<sup>2</sup>Unregulated contaminant monitoring helps U.S. EPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**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.

**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.

**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).

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