



2009 WATER QUALITY REPORT

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CITY OF YAKIMA'S DRINKING WATER

There was one violation (see below for explanation) of the standards for safe, clean water processed into the city's water distribution system during 2009. In all other categories, the levels of chemical compounds and substances in Yakima's drinking water are substantially below acceptable contamination levels set by the Environmental Protection Agency (EPA) and administered by the Washington State Department of Health (WSDOH). In our water quality control program we test for more than 100 items on a continuous, daily, weekly, monthly, and annually basis. In every case, the levels of the compounds were below federal regulations, ranking Yakima's drinking water among the safest in the country. For measurements of individual compounds, see page 3.

City of Yakima—Water Facts:

- \$0.18/100 Gallons
- Treated 3.69 Billion Gallons of Water in 2009 from the Naches River Water Treatment Plant.
- Produced 0.58 Billion gallons of water from 3 deep groundwater wells.

“Este informe contiene informacion importante sobre la calidad de agua de su comunidad. Trata de traducido, o habla con un amigo que lo entiende bien.”

ABOUT LEAD IN DRINKING WATER

We'll be happy to answer any question about the City of Yakima's water quality. Call our Water Quality Specialist at (509) 576-6477.

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. The City of Yakima is 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 (800) 426- 4791, or at <http://www.epa.gov/safewater/lead>.

Public and education tours of the City of Yakima Water Treatment Plant may be arranged by calling 575-6177.

TREATMENT TECHNIQUE VIOLATION

You can participate in decisions concerning our drinking water during City Council meetings, every first and third Tuesday at City Hall Council Chambers.

On June 30th, the Naches River WTP acquired a Treatment Technique violation because our finished water turbidity exceeded 1.0 NTU. This event lasted for about 12 minutes and included water that was up to 2.96 NTU. Public notification was published in the Yakima-Herald beginning July 17th, and through the 23rd, as required by law. The problem was caused by an automated backwash program failure, and our usual outstanding performance has been maintained ever since. Our second TOP bronze certificate is expected in 2013.

WHERE WE GET OUR WATER

Drinking water for our Yakima customers comes from the Naches River, a surface water source, into the Naches River Water Treatment Plant at Rowe Hill. During an emergency, water can also be obtained from three deep groundwater wells. The wells are located at Kiwanis Park, Yakima Airport, and Kissel Park. These wells tap into the Ellensburg Aquifer. Our wells are also sampled and tested for contaminants. How do we protect the water quality of our emergency wells? See page 4, Wellhead Protection Program.

SOURCE WATER EDUCATION

The sources for drinking 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 radioactive material, and it picks up substances that result from animal and/or human activity. Substances that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm-water runoff, and residential uses.
- (D) Organic chemical contamination, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff, and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or the result of oil/gas production and mining activities.

CROSS CONNECTION

WHAT IS IT AND WHY IS IT IMPORTANT?

Cross-connections are actual or potential physical connections between a public water system or the customer's water system and any source of non-potable liquid, solid or gas that could contaminate the potable water supply by backflow; backflow is flow that has reversed direction. An example of a residential cross-connection is an underground lawn irrigation system that uses domestic water for supply and is connected to that supply without any type of backflow prevention device installed. Questions, please call 575-6154.

KEY TO TABLES:

\leq = Less Than

\geq = More Than

ND = Not Detected

Trigger = Drinking water response level. Systems with analytes detected at concentrations in excess of this level are required to take additional samples.

HAA5 = Haloacetic Acids

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

TTHM = Total Trihalomethanes

MDL = Method Detection Limit of current testing methods.

NTU = Nephelometric Turbidity Unit

ppm = parts per million

ppb = parts per billion

ppt = parts per trillion

Explanation of the Water-Quality Tables

The charts in this report provide representative analytical results, collected in 2009 from the City of Yakima water system. Please note the following definitions:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.



EPA Regulated Inorganic Compounds

Compound MCL MCLG Detected

Values in parts per million

Arsenic	0.01	0.0	<0.002*
Cadmium	0.005	0.005	<0.0003*
Chromium	0.1	0.1	<0.0047*
Mercury	0.002	0.002	<0.0003*
Selenium	0.05	0.05	<0.005*
Beryllium	0.004	0.004	<0.0002*
Nickel	0.1	0.1	<0.010*
Antimony	0.006	0.006	<0.005*
Thallium	0.002	0.0005	<0.001*
Cyanide	0.2	0.2	<0.010*

Values in parts per million

Nitrite -N	1	1	<0.05*
Nitrate -N	10	10	<0.05*
Barium	2	2	0.003*

State Regulated Inorganic Compounds

Values in parts per million

Compound Trigger MCL Detected

Lead	0.015	N/A	<0.0005*
Copper	1.3	N/A	<.002*

(sampled for at the water treatment plant effluent and not in the distribution system)

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some chemical compounds and other substances. The presence of chemical compounds and other substances does not necessarily indicate that water poses a health risk. More information about potential contaminants and possible health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

EPA Regulated Inorganic Compounds

(Secondary)

Compound MCL MCLG Detected

Values in parts per million

Iron	0.3	0.3	0.0144
Manganese	0.05	0.05	<0.002*
Silver	0.1	0.1	<0.0047*

Values in parts per million

Chloride	250	250	6.06
Zinc	5	5	0.02*
Sulfate	250	250	2.90

Secondary Inorganic Compounds are EPA standards that relate to the aesthetic quality of water, appearance, odor and taste.

* Denotes that the detected value is below the minimum reporting level required by the Washington State Department of Health.

Compounds Tested for, but NOT Regulated

Compound MCL Detected

Values in parts per million

Sodium*	-	6.35
Hardness	-	27.3

Value in color units

Color	15	<4
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State Regulated Physical Characteristics

Value in Micromhos/cm at 25 Centigrade

Conductivity**	700	99.0
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*The EPA has established a recommended level of twenty ppm for sodium as a level of concern for those customers that may be restricted for daily sodium intake.

** Conductivity testing is done in lieu of the more expensive test for Total Dissolved Solids. Exceeding the conductivity MCL would require that the City perform the test for Total Dissolved Solids.

What is a part per million? A part per million (ppm) is one pound of a substance detected in a million pounds of water. Another way to express a part per million is one penny out of \$10,000.

Turbidity, what is it?

Turbidity is a measure of the cloudiness of water. It is monitored because it is an indicator of water quality.

Water Quality Data Table ¹

Contaminant	Unit	MCL	MCLG	Annual Average	Range	Major Sources	Violation
Physical Characteristics - Clarity							
Turbidity ²	NTU	1.0	-	0.02	0.01 - 2.96	Soil runoff	Yes
Disinfection Byproducts – HAA5 +TTHM							
Haloacetic Acids ³	ppb	60	0	17.2	0 - 50.3	Disinfection Byproduct	No
Total Trihalomethanes ⁴	ppb	80	0	29.3	0 - 62.3	Disinfection Byproduct	No
Microbiological Contaminants							
Total Coliform ⁵	Sample	<5%	0	0%	0 - 100%	Naturally present in environment	No
Lead and Copper⁶							
Lead	ppm	0.015	0	0.0019	<0.0005 - 0.0091	Household Plumbing	No
Copper	ppm	1.3	1.3	0.0684	0.0262 - 0.1350	Household Plumbing	No

- The data in this table is for analysis performed on Yakima's finished drinking water.
- Regulations require NTU's never exceed 1.0 units and 95% of all NTU samples will be less than or equal to 0.30 NTU during each calendar month. The 2.96 under Range is the maximum for 2009 which was caused by an error in the automated backwash process. Review by the Department of Health concluded this was a momentary Treatment Technique violation, and the public notice was issued in July.
- A group of five Haloacetic Acids (HAA5) are sampled quarterly at four city locations. The four samples taken each quarter are averaged and the averages of each quarter are added and averaged for the year. The 50.3 ppb under Range is the maximum detected in 2009.
- Total Trihalomethanes (TTHM's) are sampled quarterly at four city locations. The four samples taken each quarter are averaged and the averages of each quarter are added and averaged for the year. The 62.3 ppb under Range is the maximum detected in 2009.
- Each year, 840 coliform samples from the distribution system are collected and analyzed. None were found positive in 2009.
- Lead and copper sampling in the distribution system is conducted every three years.



Federal Drug Administration, FDA, regulations establish limits for contaminants in bottled water.

**City of Yakima
Phone Numbers**

Water & Irrigation
575-6154

Water Treatment Plant
575-6177

Utility Services
575-6080

Water Quality
576-6477

**Water Internet
Sites**

EPA
WWW.EPA.GOV

Washington State Dept.
of Health
WWW.DOH.WA.GOV

American Water Works
Association
WWW.AWWA.ORG

City of Yakima
WWW.CI.YAKIMA.WA.US



WELLHEAD PROTECTION PROGRAM

The Washington State Department of Health requires a Wellhead Protection Program to ensure protection of groundwater supplies. The City of Yakima complies with the Washington Department of Health Wellhead Protection Program and updates this program on a bi-annual basis. For more information on the Wellhead Protection Program, please call 576-6477.

CAPITAL IMPROVEMENT PROJECTS

In 2009 we completed some water main improvements, completed some improvements to the middle pressure zone reservoirs, continued with the elimination of dead-end water mains, completed a comprehensive water distribution system leak detection program, and completed the installation of a new 4.3 million gallon per day well in Gardner Park. In 2010 we will design an automated water metering reading system, complete the 6 year Water System Plan update and continue eliminating dead - end water mains.

YAKIMA'S WATER TREATMENT PLANT RECOGNIZED FOR PERFORMANCE

The Washington State Department of Health (WSDOH) initiated the Treatment Optimization Program (TOP) in 2001 in an effort to improve the performance of rapid rate filtration surface water treatment facilities. The purpose of this voluntary program is to maximize public health protection provided by surface water treatment plants. The Yakima City Council voted to participate in the TOP in 2005, and this year WSDOH awarded a Bronze Certificate of Performance to the staff and management of the Naches River Water Treatment Plant for 3 consecutive years of outstanding performance. From 2006 through 2008, the Naches River WTP met and exceeded TOP's turbidity goal of 0.10 NTU or less 95 percent of the time; a more stringent standard than current regulatory requirements.

WATER USE EFFICIENCY

In 2003, the Washington State Legislature passed the Municipal Water Law, to address the increasing demand on our state's water resources. The City Council, in a public meeting on January 15, 2008, adopted the goals: 1) Reduce Distribution System Loss to 10% or less by July 1, 2010, 2) Maintain the current residential per capita use (average water use per person per day). These goals and measures will be re-addressed during the completion of the 2010 Water System Plan Update.

WATER AND HEALTH

Some people may be more vulnerable to certain chemical compounds and substances in drinking water than the general population. Immuno-compromised 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. EPA and the Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the **Safe Drinking Water Hotline (800-426-4791)**.

FLUORIDE

The Washington State Department of Health requires water systems that fluoridate to maintain a fluoride concentration in the range of 0.80 ppm through 1.30 ppm throughout the system. Yakima maintained an average of 0.99 ppm for 2009. The City has been fluoridating the drinking water since April 2002.