



2012 WATER QUALITY REPORT

An Annual Report on the Source and Content of Spokane's Water

2012

A Note to Our Customers

The City of Spokane is proud to provide our water customers with clean drinking water at a reasonable price. Our Water Department is dedicated to ensuring that our water service is reliable and safe to meet the needs of our customers.

We have committed to providing high quality water services and maintaining our water system while keeping rates affordable for our customers. At the direction of Spokane Mayor David Condon, we will limit annual water rate increases to the rate of inflation. We also have changed to monthly billing for water use to provide our customers with more predictable bills.

Each year, we develop this Water Quality Report to provide our customers with accurate information about the quality of the City's drinking water. We want you to have all the information you need to make decisions about the health and well-being of your family.

For 2012, as in previous years, the City of Spokane met or exceeded all federal and state drinking water standards. We operate our own accredited water quality laboratory and perform routine and frequent tests on our water. Monitoring water quality is truly a year-round job.

To get water to our customers, the City operates the third largest water system in the state of Washington. Only Seattle and Tacoma have larger water systems.

Beneath our City streets is a network of water pipes that brings water from our water wells to every home and business within our water service area. We maintain about 1,000 miles of water mains and smaller water lines. Our system is aging, and we will invest millions of dollars to replace water mains, replace and upgrade pumps, and make other improvements this year and for many years to come.

We encourage you to read through this report to gain a better understanding of our water system and the quality of our water.



Integrated utility improvement project on 29th Avenue, in 2012

It is your aquifer. Help us protect it

Spokane's source of drinking water is the Spokane Valley – Rathdrum Prairie Aquifer. Water from the Aquifer is pure enough to be pumped from the ground and used without any form of treatment. The City of Spokane adds chlorine to the drinking water in order to maintain its purity throughout the distribution system. The quality of the aquifer is fragile. Please do not pour anything on the ground or in street drains that you would not want to drink. Follow the manufacturer's directions for weed sprays, fertilizer, and insecticides. Avoid over application of any yard chemical, and provide for proper disposal.

For more information on household hazardous waste, visit the Spokane Aquifer Joint Board's website spokanaquifer.org. You can also call the Spokane Regional Solid Waste Recycling Hotline at 509.625.6800. If we are careful and follow good stewardship practices, we can continue enjoying excellent quality drinking water far into the future.

The City of Spokane is proud to send you the 2012 Consumer Confidence Report (CCR). As in previous years, your tap water met or surpassed all federal and state drinking water standards.

All drinking water may contain contaminants

All 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. More information about contaminants can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. U.S. Food and Drug Administration regulations establish the limits for contaminants in bottled water, which must provide the same protection for public health.

A word about some specific contaminants...

Radon

Radon is a naturally occurring radioactive gas that is common in the Spokane area. During 2011-2012, the City conducted tests from four source wells for Radon-222. The single highest result was 486 pCi/L and the lowest was 262 pCi/L. Exposure to excessive amounts of radon may increase cancer risk.

Compared to radon entering the home through soil, radon entering the home through tap water would, in most cases, typically be 1 – 2 % of the radon in indoor air. For local information concerning radon in your home, see the Washington Dept. of Health Radon Outreach webpage (<http://www.doh.wa.gov/ehp/rp/environmental/radon.htm>) or call EPA's Radon Hotline (800-SOS-RADON).

Arsenic

Your drinking water currently meets EPA's revised drinking water standard for arsenic. However, it does contain low levels of arsenic. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory diseases are due to factors other than exposure to arsenic.

Lead

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 Spokane 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 or at www.epa.gov/safewater/lead.

Water Use Efficiency

The Water Use Efficiency Rule requires that each water system calculate the system loss to leakage. This calculation for Distribution System Leakage (DSL) determines the volume of water that cannot be attributed to delivery to a customer and is assumed to be lost to the ground. To comply with the Water Use Efficiency Rule standard for DSL, a water system must have a 3-year running average less than 10%. The DSL for the City of Spokane Water System for 2012 is 19.9% and the three year average is 19.4%, which means the City is not in compliance with the DSL standard (*see table right*).

	2012
Total Water-Produced & Purchased, gallons	21.0 billion
DSL, percent	19.9 %
DSL, volume, gallons	4.19 billion

GOALS

Spokane's City Council adopted these Water Use Goals at a public hearing on May 1, 2006. This includes seasonal Goals for reductions in water use, based on per capita use. It is our estimate that the City did not achieve its seasonal goals for July through September 2012, although the trend shows continuing reductions. In the results, the difference between the Goal and the Use is a percentage. A positive value equals an exceedance of the goal. (*see table below left*)

Water Year	2012 Pumpage (1,000 Gallons)		
	Total	Goal	Result
October (2011) through March (2012)	6,910,801	6,970,000	- 0.8 %
April through June (spring)	5,184,227	6,930,000	-25.2 %
July through September (summer)	9,164,570	8,670,000	5.7 %

Sum of seasonal totals 21,259,598

The City of Spokane will continue working toward the adopted goals. For more information regarding the City of Spokane Water Stewardship Strategic Plan go to: WaterStewardship.org

Contaminants Found in Drinking Water Testing in 2012

Source Water Testing

Contaminant	Units	MCLG	MCL	Average	Range	Possible Source
Arsenic	ppb	0	10	(a)	2.9 to 4.6	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Nitrate	ppm	10	10	(a)	0.76 to 3.68	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Gross Alpha emitters	pCi/L	0	15	(a)	< 1.0 to 2.3	Erosion of natural deposits
Radium 226 and 228 (b)	pCi/L	0	5	(a)	0.5 to 2.3	Erosion of natural deposits

End of Pipe Testing

Contaminant	Units	MCLG	MCL	2012 results - 90th Percentile	Number of Sites Exceeding AL	Possible Source
Copper (c) - tested Summer 2012	ppm	1.3	TT,AL= 1.3	0.09 (d)	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (c) - tested Summer 2012	ppb	0	TT,AL= 15	3.80(d)	0	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminant	MCL	MCLG	highest percent detected	Sample date	Violation	Possible Source
Total Coliform	5% of monthly samples are positive	0	0.6 %	one detection on July 2, 2012	No	Naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

Contaminant	Units	MCLG	MCL	LRAA	Range	Possible Source
Disinfection Byproducts - Total Trihalomethanes (TTHMs)	ppb	0	80	3.98	0.63 to 5.27	By-products of drinking water chlorination

- (a) Compliance with the MCL is determined by single sample results, so no average is used
 (b) Gross Alpha results were used in lieu of Radium 226, one half of the detection limit of 1.0 used for the ND
 (c) Faucet samples were from at risk homes (lead service lines and /or lead soldered pipes)
 (d) 90% of at risk homes had this concentration or less of lead/copper

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

LRAA - Locational Running Annual Average

Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.

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

ppb - parts per billion (same as µg/L - micrograms per liter)

ppm - parts per million (same as mg/L - milligrams per liter)

TT - Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

pCi/L - Picocuries per liter (a measure of radioactivity)

ND - None detected

< less than

Potential sources of water contamination

Across the nation, sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances from the presence of animals or human activity.



Managing the City's Overall Water Management System

At the City of Spokane, we are working to align our organization for the future. We want to gain efficiencies, reduce duplication, and give citizens the greatest value for their money.

As a result, we have begun to blend our Water and Wastewater utilities as two parts of an overall water management system. We are working on a financial merger of these utilities, along with related organizational changes, that would support holistic planning for major construction needed to maintain these important systems and generate additional efficiencies.

The systems of pumps and piping are similar in both areas, and we find a comparable ongoing need for capital construction and main replacement. Both sides of the system have responsibilities to protect the aquifer, wellheads, and ultimately the quality of our drinking water, and additionally, efforts to reduce water consumption benefit both water and wastewater.

They also jointly support additional work to improve the health of the Spokane River. We are developing a new approach to managing stormwater and wastewater that enters the River that's both environmentally and financially responsible. It's called the Integrated Clean Water Plan.

Our Integrated Clean Water Plan will require a significant investment. We will include projects to reduce untreated stormwater and combined wastewater and stormwater from flowing directly into the River. Pollutants including PCBs, bacteria, phosphorus, and heavy metals are part of those flows.

We want to:

- Prioritize work that will have the greatest potential to reduce pollution going into the River.
- Include "green" technologies like rain gardens and pervious pavement as they make sense.
- Leverage dollars to achieve other benefits, like improved parks, streets, and water delivery.

S P O K A N E W A T E R D E P A R T M E N T

Your Participation is Welcome

The Mayor recommends Water Department policy and rates to the Spokane City Council.

The Council meets every Monday at 6 p.m. in the City Council Chambers at City Hall (808 W Spokane Falls Blvd., Spokane, WA)

Special Notice

for the elderly, infants, cancer patients, people with HIV/AIDS, or other immune problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, transplant recipients, persons with HIV/AIDS or other immune disorders, some elderly and infants can be particularly at risk for infection. These people should seek advice from their health care providers.

The U.S. EPA - Center 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 1-800-426-4791.

English:

This report contains important information about the drinking water supplied by the City of Spokane. Translate it, or speak with someone who understands it well.

Russian:

В этом отчете содержится важная информация относительно питьевой воды, поставляемой службой города Спокэн. Переведите этот отчет или поговорите с тем, кто его хорошо понимает.

Spanish:

Este reporte contiene información importante acerca del agua potable suministrada por la Ciudad de Spokane. Tradúzcalo, o hable con alguien que lo entienda bien.

Vietnamese:

Bản phúc trình này chứa đựng những thông tin quan trọng về nước uống được cung cấp bởi City of Spokane. Hãy phiên dịch, hay hỏi thăm người nào hiểu rõ về tài liệu này.