2017 Water Quality Report

CITY OF SPOKANE

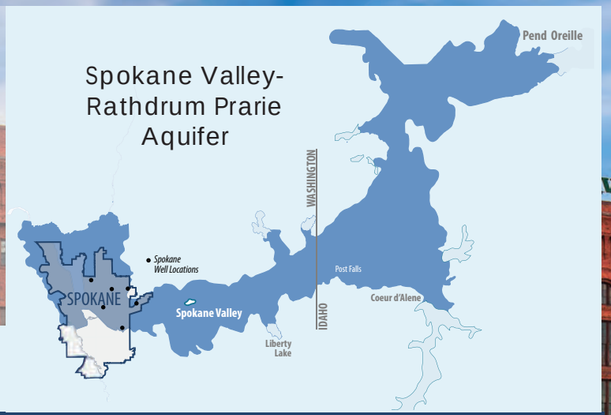
Our Drinking Water From

SOURCE TO TAP

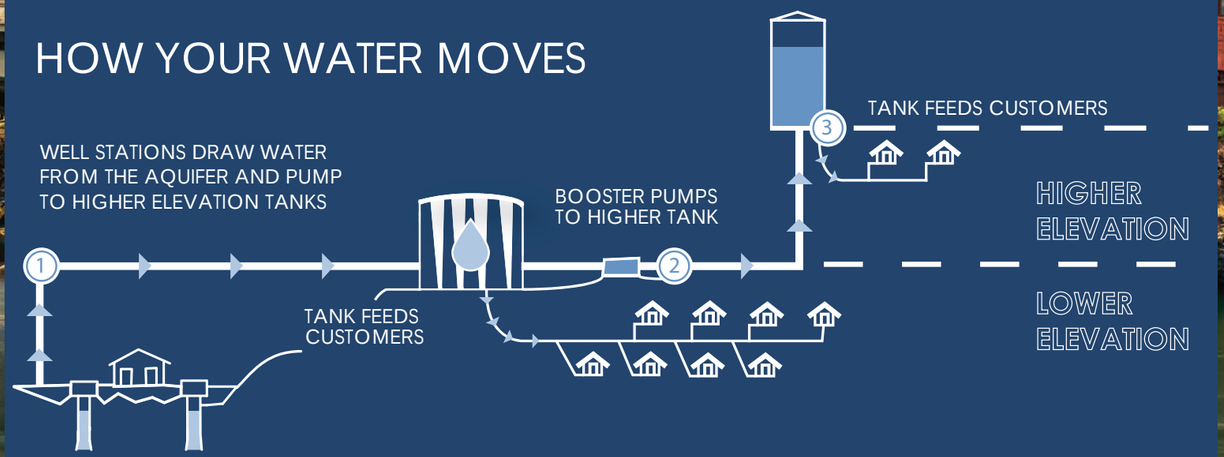
The Spokane Valley - Rathdrum Prairie Aquifer was created by Ice Age floods that deposited a thick layer of boulders and gravel. This rock and gravel layer is now filled with water and extends 135 square miles from Pend Oreille Lake in Idaho to just past the western edge of the City of Spokane. It ranges in surface depth from a few feet in some areas to as much as 500 feet in others.

We are working and living over our drinking water source. Since our water is beneath us, it is important that we follow good stewardship practices and not pour anything on the ground or in storm drains that you would not want to drink.

For more information, visit: www.spokaneaquifer.org.



HOW YOUR WATER MOVES



1. The City of Spokane has seven wells located throughout the City from which it draws water directly from the aquifer. The water from the aquifer is pure enough to be pumped directly from the ground without any treatment. We simply add chlorine to the water to ensure that purity is maintained throughout the distribution system.

2. To pump the water up to storage tanks and reservoirs, booster stations are located throughout the city. These stations contain large pumps and motors to help move the well water from lower elevations to the tanks at higher elevations within the distribution system. Water at a higher elevation in a tank provides water pressure to the homes below it.

3. More than 1,000 miles of water mains are located throughout the City. Water reaches your house directly from service lines running off smaller mains. To meet customers' needs, the City has over 100 million gallons of water stored in reservoirs. The amount of water stored in a given tank depends on both the water demand for that area as well as the fire protection requirements.

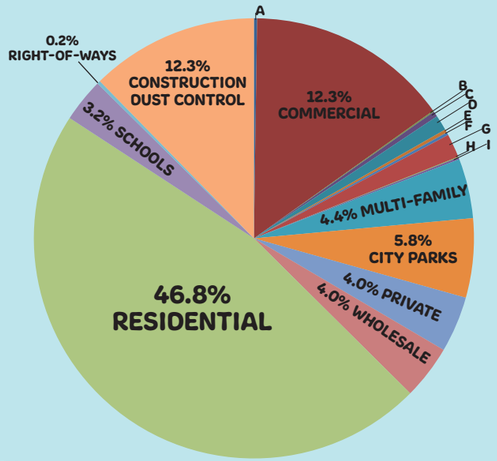
4. Throughout the year, hundreds of water quality tests are performed, water mains, valves and meters are repaired and replaced, and water department personnel continually search for leaks and problems to ensure you the best drinking water possible. Highly trained operators monitor the distribution system from a 24-hour control center.

Water Efficiency:
THE KEY TO A SUSTAINABLE FUTURE

The City of Spokane has taken an active role to safeguard the quality and quantity of our water supply and additional steps to conserve water through educational programs, metering water use, repairing leaking pipes, and implementing a conservation-oriented rate structure.

The City has adopted Water Use Efficiency Goals based on metered usage. The goals are a 0.5% annual residential indoor reduction and a 2% annual reduction in outdoor irrigation for residential, commercial/industrial, and government use.

2017 CITY OUTDOOR WATER USE



KEY:

A	0.2%	CITY GOV'T	C	0.4%	COUNTY GOV'T	E	0.2%	FEDERAL GOV'T	G	1.7%	IRRIGATION, NOT PARKS	I	0.1%	CITY LIBRARY
B	0.1%	COMMERCIAL/MULTI-FAMILY	D	1.1%	DUPLEX	F	0.2%	STATE GOV'T	H	0.1%	MOBILE HOME PARK			

2017 Water Use Efficiency Goals

	Goal (gal/day)	Actual (gal/day)
Indoor Residential Use	120	118
Outdoor Residential Use	479	638
Outdoor Commercial/ Industrial Use	4,064	4,602
Outdoor Government Use	4,631	5,410

2017 GOAL RESULTS

One of the four goals were achieved in 2017. The summer of 2017 set a record of 80 consecutive days without measurable rainfall and a record 15 day stretch of 90+ degree weather. This weather resulted in increased outdoor irrigation. Help us meet this year's goals this summer, and save money on your water bill at the same time - continue to find ways to use even less.

INTRODUCING: LAWN REPLACEMENT REBATE

The City of Spokane has launched a new program to help residents reduce the amount of water they use for outdoor irrigation. The SpokaneScape rebate program allows for up to a $500 credit on a resident's City utility bill for removing lawn and replacing it with water-smart plants and mulch.

SpokaneScape is water-efficient landscaping that has been designed specifically for the Spokane area; its focus is on the replacement of lawn with low-volume irrigation and drought tolerant plant material. A well designed SpokaneScape will beautify your property, protect our natural resources, and will inevitably reduce maintainance.

The rebate totals 50 cents per square foot of lawn removed; the program requires a minimum removal of 300 square feet. A SpokaneScape program application and guidebook is available at **www.waterstewardship.org**.

SLOW THE FLOW
A program of the City of Spokane
waterstewardship.org

DISTRIBUTION SYSTEM LOSS

The Washington State Water Use Efficiency Rule (WUE) requires that each water system calculate the water system loss to leakage. The calculations determine the volume of water that cannot be attributed to delivery to a customer and is assumed to be lost to the

2015 - 2017 Distribution System Loss				
	2015	2016	2017	Average
DSL, percent	13.4%	11.7%	12.6%	12.6%
DSL, volume (gallons x 1000)	3,206,643	3,206,643	2,901,465	3,129,000

To comply with the WUE standard for Distribution System Loss (DSL), a water system must have a 3-year running average of less than 10%. The DSL for the City of Spokane Water System for 2017 is 12.6% and the three year average is 12.6 %, which means the City has not met the DSL standard.

LEAK DETECTION PROGRAM

Designated Water Department personnel identify leaks using state-of-the-art, sonic leak detection equipment. In the last year, the Water Department has added new techniques to continue to work on this concern. The City has contracted with a company that uses satellite imagery combined with a unique computer analysis to identify locations where leaks occur.

This leak detection program is instrumental in reducing the amount of unaccounted water throughout the distribution system. An aggressive leak detection program is a key element in the Water Department's conservation efforts.

WATER QUALITY DATA

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.

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 land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances from the presence of animals or from the presence of human activity.

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 visiting the EPA's Safe Drinking Water Web-page: **epa.gov/safewater**

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 US 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 EPA's Safe Drinking Water Web-page: **epa.gov/safewater**

RADON

Radon is a naturally occurring radioactive gas that is common in the Spokane area. During 2017, the City conducted tests from two source wells for Radon-222. The single highest result was 561pCi/L and the lowest was 493pCi/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, call the EPA's Radon Hotline (800-SOS-RADON).

2017 DETECTED CONTAMINANTS

The results of monitoring in 2017 are shown in the table below. These results are for parameters regulated by federal and state agencies. For other water quality information, check our website: my.spokanecity.org/publicworks/water/ quality or call 509-625-7800.

Contaminant	Units	MCLG	MCL	Average	Range	Possible Source
SOURCE WATER TESTING						
Arsenic	µg/L	0	10	(a)	2.6 to 2.8	Erosion of natural deposits; Runoff from orchards; Run-off from glass and electronics production wastes
Nitrate	mg/L	10	10	(a)	0.79 to 3.26	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Gross Alpha	pCi/L	0	15	(a)	<3.0 to 3.2	Erosion of natural deposits
Combined Radium 226 & 228 (b)	pCi/L	0	5	(a)	<1.5 to 3.2	Erosion of natural deposits
END OF PIPE TESTING						
Total Trihalomethanes	µg/L	0	80	3.23	1.45 to 4.70	By-product of drinking water chlorination

TERMS AND ABBREVIATIONS

Some of the terms and abbreviations contained in this report are unique to the water industry and might not be familiar to all customers. Terms used in the table are explained below.

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: same as ug/L, micrograms per liter, and parts per billion
ppm: same as mg/L, milligrams per liter, and parts per million
Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.
Picocuries per liter (pCi/L) - a measure of radioactivity.
ND: None Detected
NOTES
(a) Compliance with 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 was used for the ND.
(c) Faucet samples were from 'at risk' homes (those with lead service lines and those with copper pipes with lead solder joints).
d) 90% of at risk homes had this concentration or less of lead/copper

2015 LEAD AND COPPER MONITORING RESULTS

During 2015, the City tested 58 at-risk residences for lead. The next sampling event for lead & copper is scheduled for 2018. The single highest result in 2015 was 13.5 ppb. This result for lead is below the 15 ppb Action Level for lead.

2015 LEAD AND COPPER MONITORING RESULTS						
Parameter	Units	MCLG	MCL	90th Percentile	Houses Exceeding AL	Possible Source
Copper(c) -tested August 2015	mg/L	1.3	TT, AL=1.3	0.06 (d)	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead(c) - tested August 2015	µg/L	0	TT, AL=15	5.12(d)	0	Corrosion of household plumbing systems; Erosion of natural deposits

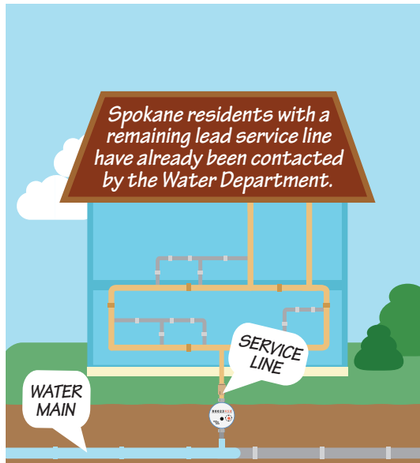
(c) Faucet samples were from 'at risk' homes (those with lead service lines and those with copper pipes with lead solder joints).
d) 90% of at risk homes had this concentration or less of lead/copper

The City's water system has routinely met all water quality standards for lead, determined through regular mandatory testing for lead in the City's water system including at homes with lead service lines. Water from the Spokane Valley-Rathdrum Prairie Aquifer is less corrosive than most surface water sources because it is hard and not acidic. Still, removing the pipes eliminates a potential contamination source.

In 2016, the City of Spokane Water Department initiated a program to remove the remaining 486 lead service lines known to still be in use. The Water Department is on track to complete this project by August of 2018.

For residents with lead service lines, the Washington State Department of Health suggests a few simple steps to reduce the risk of ingesting lead through drinking water:

- Let the water run until cold before filling a glass to help flush out water that has been sitting in the pipes and is more likely to contain lead.
- Use cold water for drinking, cooking, or making baby formula. Hot water can cause lead to leach into the water at a higher rate.



A WORD ON LEAD

Lead is a naturally occurring metal that is all around us. It was used for many years in paints, plumbing and other products found in and around homes. 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 Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

You can check what your service line is made of online.

- Go to: maps.spokanecity.org
- Search for an address and zoom in
- Turn on the water layer under utilities
- Click on the blue line that leads to the property; it will say it's copper, galvanized or lead
- Some service lines are listed as unknown, call 625-7800 for more information

A WORD FROM THE CITY OF SPOKANE

In this report, you can read about a new program called SpokaneScape that will help our customers reduce the amount of water they use for outdoor irrigation. The program provides for up to a $500 credit on a resident's utility bill for removing lawn and replacing it with water-smart plants and mulch—known as SpokaneScape.

When we look at the amount of water used outdoors, residential use clearly stands out, representing about half of all water used for irrigation. Lawns are thirsty, and it's time that we start to incorporate other landscaping at our homes that is still beautiful but uses less water.

Our Parks Department is looking to reduce irrigated turf, too. A plan for replacing the irrigation system at Indian Canyon Golf Course also removes about 8 acres from irrigation—about 10 percent of the total. We're also working on demonstration SpokaneScape gardens near Upriver Dam and at Riverfront Park. And we're combining these efforts with work to chase leaks in the 1,000 miles of pipe that make up our water distribution system.

It's all part of the City's larger efforts to protect our water resources for the future. The City's new joint Mayor-Council Strategic Plan includes a strategic initiative around smart use of water resources. The goal is to accommodate growth in our City without pumping more water.

In Spokane, we are blessed to live over an aquifer that provides us with clean, reliable drinking water. The aquifer supply is robust, but we can see the stresses in the heat of the summer when flows in the Spokane River drop to their summer lows. The river and the aquifer exchange water.

Protecting the quantity and quality of our water supply is the top priority for us as your water provider. We ask you to join us in this work.

YOUR PARTICIPATION IS WELCOME

The Mayor recommends Water Department policy and rates to the Spokane City Council. The Council meets every Monday, excluding holidays, at 6:00 pm in the Council Chambers at City Hall (808 W Spokane Falls Blvd., Spokane, WA).

City of Spokane Water Department
(509) 625-7800 (24 Hours a Day)
www.spokanewater.org

My Spokane 311
311 (7a.m. - 6 p.m.)
MySpokane311.org

Department of Ecology
Eastern Regional Office
(509) 329-3400

Spokane Regional Health District
(509) 324-1560

Spokane County
Water Resources (Division of Utilities)
(509) 477-3604

Office of Drinking Water
Washington Department of Health
Eastern Regional Office
(509) 329-210

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 w contiene información importante acerca del agua potable suministrada por la Ciudad de Spokane. Tradúzcalo, o hable con alguien que lo entiende bien. Para ver información adicional, visite al; http://www.epa.gov/safewater/agua.html.

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.