

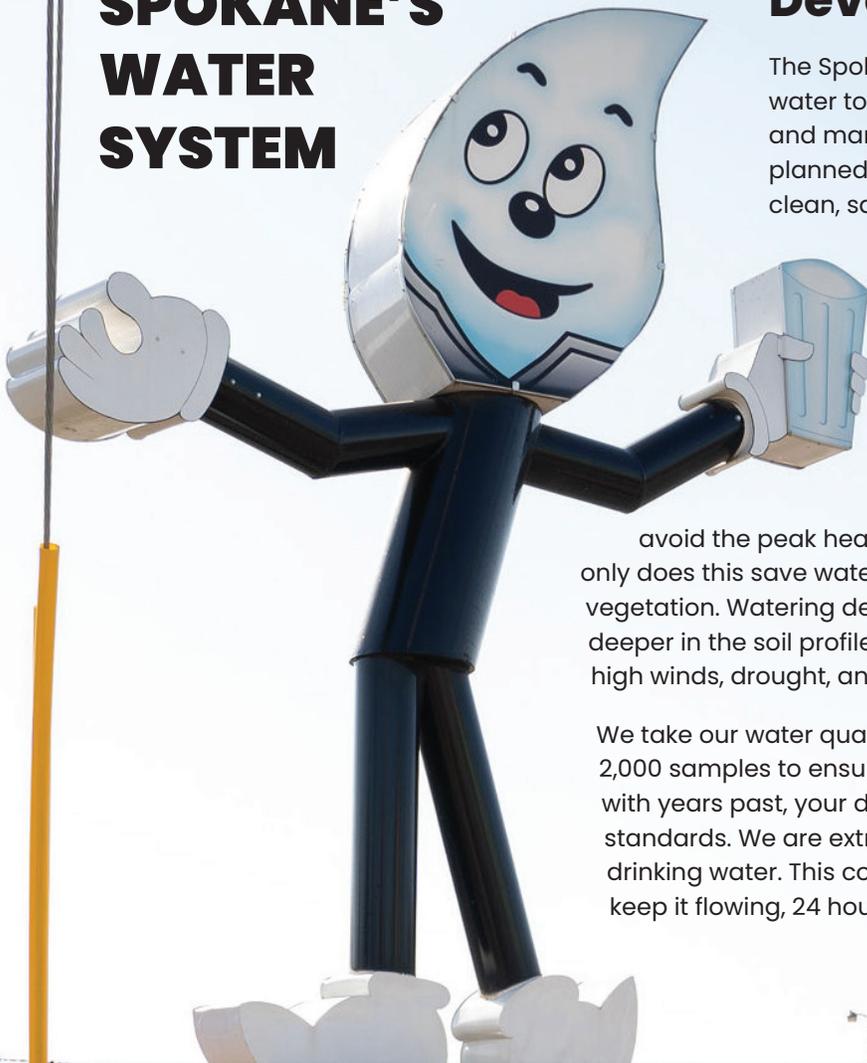


2021

# **WATER QUALITY REPORT**

CITY OF SPOKANE WATER DEPARTMENT

# SPOKANE'S WATER SYSTEM



## Devoted To Water Quality

The Spokane Water Department proudly serves high-quality water to more than 230,000 people in the City of Spokane and many surrounding suburbs. Since 1884, we have expertly planned, developed and operated a system that provides clean, safe, great-tasting water. We are one of Washington's oldest and the third largest water utility – with a total water service area of approximately 156 square miles.

The natural environment is our lifeline, and we help protect it by promoting wise water use. With City Council's passage of a new ordinance, this year we are requiring our customers to water their landscape on odd or even days of the week and avoid the peak heat hours of the day between 10 a.m. and 6 p.m. Not only does this save water and money but it also improves the health of the vegetation. Watering deep and infrequently encourages plant roots to grow deeper in the soil profile and become more resilient to weather extremes—high winds, drought, and high temperatures.

We take our water quality very seriously. Last year we collected more than 2,000 samples to ensure our water is as clean and safe as possible. In line with years past, your drinking water meets or exceeds all water quality standards. We are extremely proud to provide you reliable, high-quality drinking water. This couldn't happen without our essential employees who keep it flowing, 24 hours a day, 365 days a year.



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*For 45 years, the 15-foot tall Willing Water held up a concrete glass of water, cheering the surrounding area, resting atop our 9th and Pine reservoir. Willing Water, also known as Willy, is a character developed by the American Water Works Association in the 1940s as a national water mascot. Willing now stands at the Water Department on East North Foothills Drive.*



## HYDRANT LOCK PROGRAM

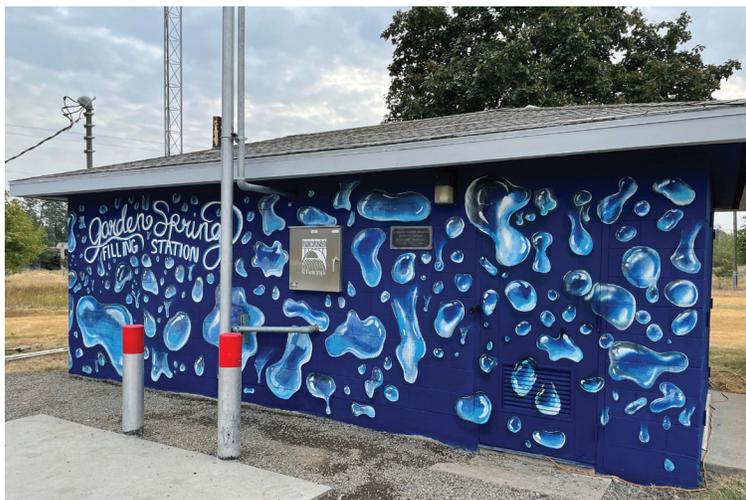
The City of Spokane Water Department is adding security measures to its fire hydrants to ensure protection of the City's water supply. The Water Department will begin installing locks in the West Plains area in June 2022, east of the Spokane International Airport and south of Sunset Blvd. We have worked with the Spokane Fire Department, the surrounding fire districts, Spokane International Airport and public works users to ensure the hydrants are readily available for emergencies.

"Our citizens rely on our water system to provide them with clean, safe drinking water on demand every day," says Loren Searl, Water and Hydroelectric Department Director. "It is an important responsibility to ensure that no contaminants enter the water system through the use of hydrants and other accessible points to the water system."



The City intends to lock all 7,500 fire hydrants as additional bulk water filling stations are built. In lieu of fire hydrant access, contractors and private residents can access water using the Garden Springs filling station located at 4821 W. Garden Springs Rd. to fill containers ranging from a 55-gallon barrel to a 5,000-gallon water truck. Customers can contact My Spokane 311 to register for an account and receive access codes.

A hydrant permit and backflow prevention cage will continue to be required to access fire hydrants in the water system. Fines exist for those who violate the Hydrant Permit Policy and payment is required to compensate for any damage done to City equipment or infrastructure. The public should call the Water Department immediately at 509-625-7800 if they witness anyone tampering with a lock or using a hydrant without a backflow prevention cage attached.



Garden Springs Filling Station is available for public use year round.

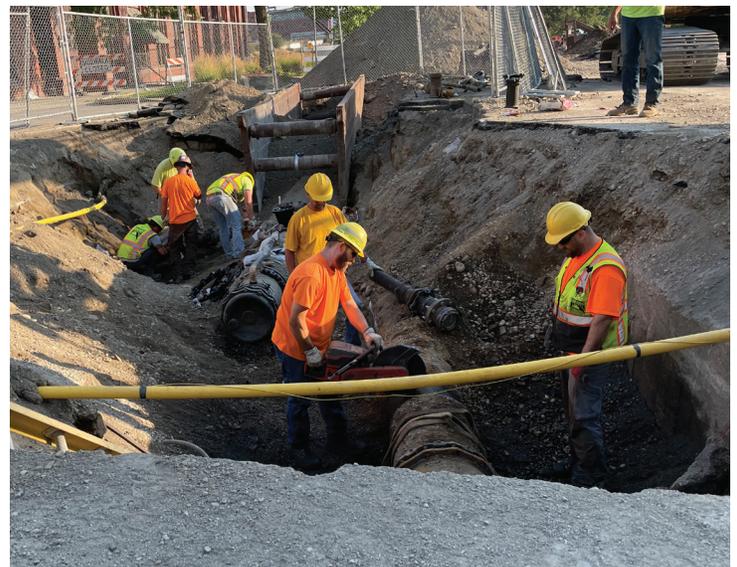
Antenna installation and view atop the 130-foot Eagle Ridge Water Reservoir.



## WATER AT WORK

Investments toward new infrastructure and the rehabilitation of water system assets are in place for the 2022 construction season. Here are some project highlights:

- ◆ A new water reservoir is being built at the Spokane International Airport to increase system reliability for customers and the fire department, especially during the summer months. The construction is expected to last two years and when completed will be the largest composite reservoir in the country with a capacity of 4.2 million gallons.
- ◆ The Havana Well Station's first phase of construction is under way and once fully online will become the eighth well station under City of Spokane operation.
- ◆ Our Hoffman Well Station rehabilitation construction is in progress, the completed project will bring both wells back online and provide reliable production capacity.
- ◆ The meter infrastructure is starting to get smarter. Meter maintenance crews are hard at work updating meters to an automated reading system. Once online, customers will have access to more granular data and insight into their water consumption.



Construction Crew replacing water main on Post Street.

# WHERE DOES YOUR WATER COME FROM?

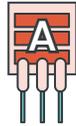
All of the water in Spokane comes from an underground aquifer—the Spokane Valley–Rathdrum Prairie (SVRP) Aquifer, which was designated a sole source aquifer in 1978.

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 370 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 we would not want to drink.

## SPOKANE'S WATER SYSTEM

The City of Spokane has seven wells located throughout the City to draw drinking water directly from the aquifer. The water from the aquifer is pure enough to be pumped directly from the ground and sent to customers without any treatment. We add chlorine to the water to ensure that purity is maintained throughout the distribution system.



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.

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.



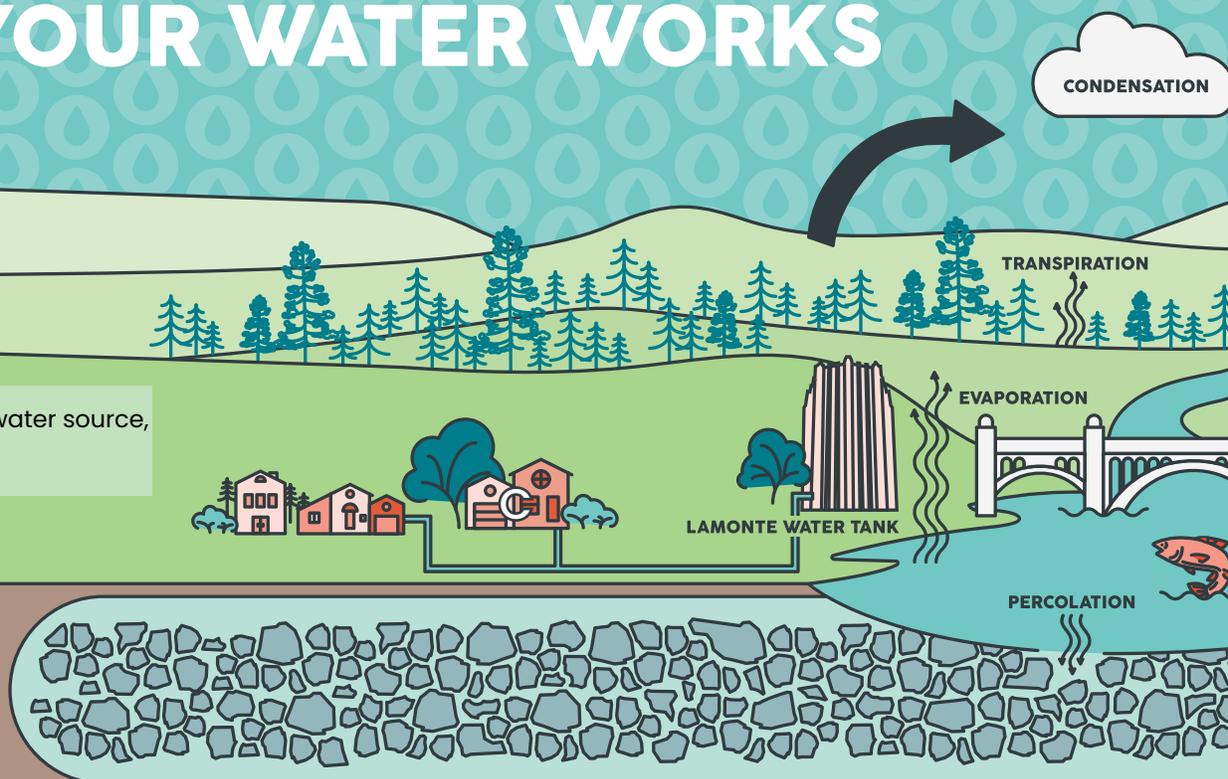
Throughout the year, hundreds of water quality tests are performed; water mains, valves and meters are repaired and replaced, and Water Department personnel continually search for leaks and problems to ensure you the highest quality drinking water possible. Expertly trained operators monitor the distribution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



The stunning view inside Spokane's first well.

# HOW YOUR WATER WORKS

To learn more about our water source, visit: [spokaneaquifer.org](http://spokaneaquifer.org)



# LET'S GET WATER WISE, SPOKANE!

Saving water makes it possible to use our existing water supplies more efficiently, ensure enough water is available to meet your needs as well as the needs of our growing community without costly infrastructure additions. The Washington State Department of Health requires municipal water suppliers to establish a water conservation goal and report on this annually. In 2020, the Spokane City Council passed the Conservation Master Plan and approved the following updated goals:

Reduce seasonal peak demand (May–September) by 15% and lower the base (indoor water consumption) by 5% over the next 10 years. With these goals, we are focusing efforts on customer irrigation education, turf replacement and water efficient equipment upgrades.

## CUSTOMER REBATES

We offer rebates for residential, multi-family and commercial customers ranging from toilets to irrigation controllers. All you need to do is purchase the pre-approved device, then submit a receipt and photo of the installed product to receive credit back on your utility account. Visit [WaterWiseSpokane.org](http://WaterWiseSpokane.org) to learn more!

## REDUCING PEAK DEMAND

Outdoor watering of lawns and gardens makes up approximately 83% of average home water use in Spokane. The City Council adopted a new ordinance in 2022 that requires citizens to comply with water saving measures like every other day watering and watering outside the hours of 10 a.m. and 6 p.m. You can reduce your outdoor water use by cutting back on irrigation and planting more drought tolerant landscaping.

# WATER DISTRIBUTION SYSTEM LOSS

## 2019–2021 DISTRIBUTION SYSTEM LOSS

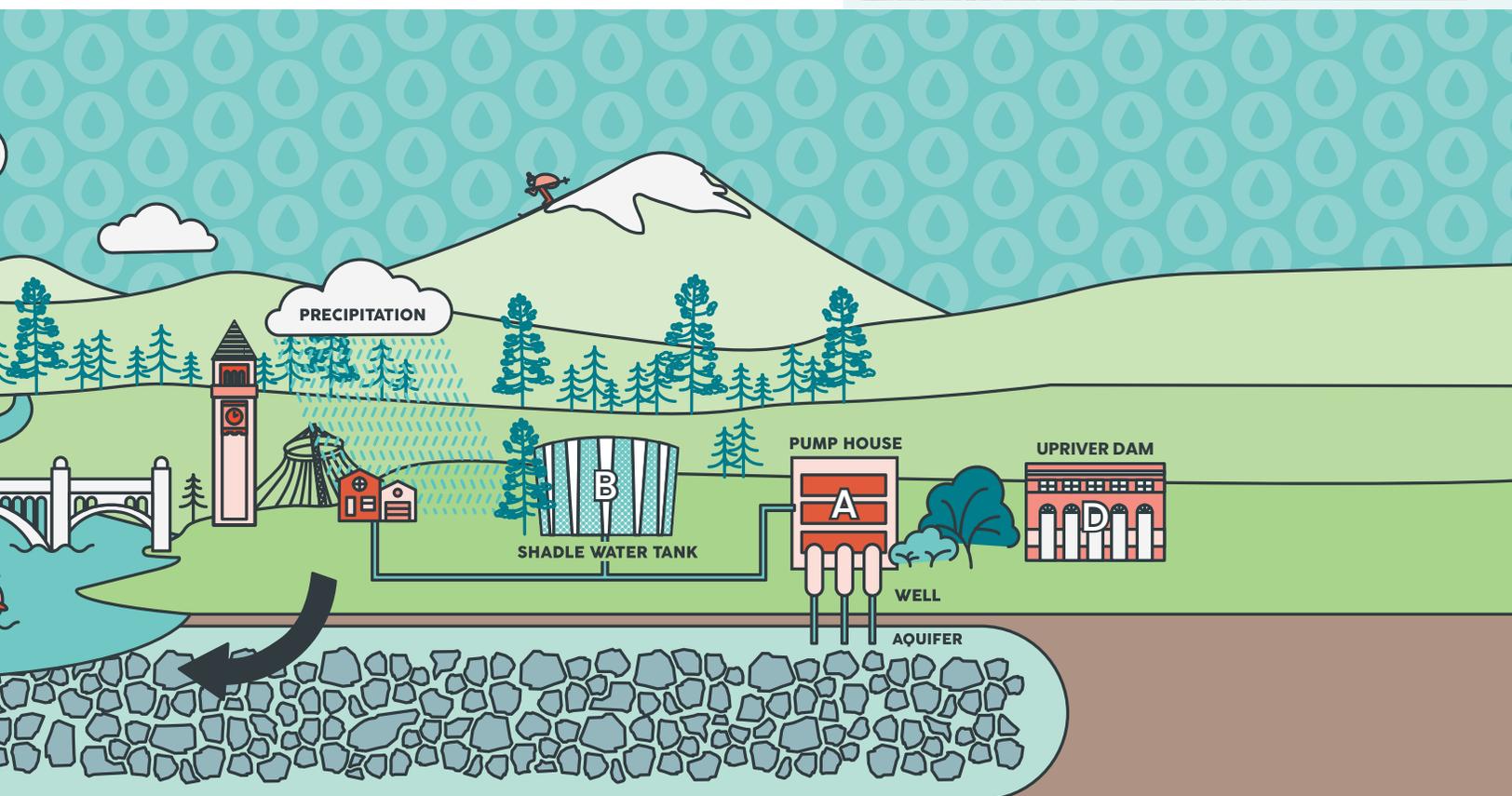
	2019	2020	2021	Average
DSL, percent	14.5%	13.5%	12.6%	13.5%
DSL, volume (gallons x 1,000)	3,321,717	3,104,976	3,084,691	3,170,461

The Washington State Water Use Efficiency Rule (WUE) requires that each water system calculate the amount a water system has lost or unaccounted for. The calculations determine 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 WUE standard for Distribution System Loss (DSL), a water system must have a three-year running average of less than 10%. The DSL for the City of Spokane Water System for 2021 is 12.6% and the three-year average is 13.5%, which means the City has not met the DSL standard.



Repair crew uncovers water main break on Foothills and Perry





## POTENTIAL SOURCES OF WATER CONTAMINATION

### Sources of Water

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.

### Potential Contaminants

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.

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 Website: [epa.gov/safewater](https://www.epa.gov/safewater)

### People Who May be More at Risk

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 EPA's Safe Drinking Water Hotline (800-426-4791) and website: [epa.gov/safewater](https://www.epa.gov/safewater)

### ARSENIC

City of Spokane drinking water currently meets EPA's revised drinking water standard for arsenic. However, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water.

EPA continues to research the health effects of low levels of arsenic, which is known to cause

cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Information on arsenic in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline.

### 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. In 2018, the City of Spokane completed the removal of all known lead service lines in our water system. The City is responsible for providing high quality drinking water, but cannot control the variety of materials installed prior to regulatory changes in home 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 two 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 1-800-426-4791, or at [epa.gov/safewater/lead](https://www.epa.gov/safewater/lead).

### RADON

Radon is a naturally occurring radioactive gas that is common in the Spokane area. During 2020, the City conducted tests from two source wells for Radon -222. The single highest result was 540 pCi/L and the lowest was 440 pCi/L. Exposure to excessive amounts of radon may increase cancer risk. The EPA has proposed a MCL of 300pCi/L, which has not been finalized.

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. Breathing air containing radon can lead to lung cancer and/or drinking water containing radon also may cause increased risk of stomach cancer. If you are concerned about radon in your home, you can purchase a test kit. Testing is inexpensive and easy, many radon test kits can be found online or in home improvement stores.

For more information concerning radon in your home, call the EPA's Radon Hotline (1-800-55-RADON) or visit [epa.gov/radon/radon-hotlines-and-information-resources](https://www.epa.gov/radon/radon-hotlines-and-information-resources).



# CITY OF SPOKANE WATER QUALITY RESULTS FOR 2021

Spokane’s drinking water meets or exceeds all State and Federal drinking water quality standards. In 2021, we tested for 35 inorganic parameters with detections in arsenic, barium and nitrate. 127 organic compounds were tested and none were detected. We disinfect our drinking water with chlorine gas, resulting in the generation of low concentrations of disinfection byproducts as summarized below (total Trihalomethanes). Routine testing for microbiological contaminants produced no detections. The detections mentioned are below applicable drinking water standards. The results were within the range of results from previous testing.

## DETECTED CONTAMINANTS

The results of monitoring in 2021 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: [spokanewater.org](http://spokanewater.org) or call 509-742-8166.

Contaminant	Units	MCLG	MCL	Average	Range	Possible Source
<b>SOURCE WATER TESTING</b>						
Arsenic	µg/L	0	10	(a)	2.3 to 3.5	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	mg/L	2	2	(a)	0.02-0.05	Erosion of natural deposits; Discharge of drilling waste; Discharge from metal refineries
Nitrate	mg/L	10	10	(a)	0.71 to 3.21	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Combined Radium 226 & 228 (b)	pCi/L	0	5	(a)	1.5 to 2.9	Erosion of natural deposits
<b>END OF PIPE TESTING</b>						
Total Trihalomethanes	µg/L	0	80	3.78	1.50 to 3.88	By-product of drinking water chlorination

## LEAD & COPPER

During 2021, the City tested 65 at-risk residences for lead. The single highest result in 2021 was 5.46 ppb. This result for lead is below the 15 ppb Action Level for lead. In 2018, the City completed the removal of all known lead service lines in our water system. Source water is analyzed for lead concurrent with in-home testing; in 2021 the maximum concentration of all the wells was less than 1.0 ppb.

Contaminant	Units	MCLG	MCL	90th Percentile	Houses Exceeding AL	Possible Source
<b>HOUSEHOLD WATER TESTING</b>						
Copper(c) -tested August 2021	mg/L	1.3	TT, AL=1.3	0.08 (d)	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead(c) -tested August 2021	µg/L	0	TT, AL=15	1.83(d)	0	Corrosion of household plumbing systems; Erosion of natural deposits

## 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 3.0 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.

(e) Unregulated contaminant monitoring help’s EPA to determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.



## Customer Resources

### Water Quality

Learn more about water quality online at: [SpokaneWater.org](http://SpokaneWater.org) or email [waterinfo@spokanecity.org](mailto:waterinfo@spokanecity.org)

Report urgent concerns, such as water outages, discolored water, leaks, hydrant misuse to the Water Department's 24-hour radio room at: **509-625-7800**

Ask questions about Spokane's water quality, such as chlorine or hardness at: **509-742-8166**

#### Ask general water quality questions:

Office of Drinking Water Washington DOH Eastern Regional Office: **509-329-2100**

Spokane Regional Health District: **509-324-1560**

Department of Ecology Eastern Regional Office: **509-329-3400**

Spokane County Water Resources: **509-477-3604**

EPA's Safe Drinking Water Hotline: **800-426-4791**

### Conservation & Rebates

Explore programs and rebates to help you save water and money at: [WaterWiseSpokane.org](http://WaterWiseSpokane.org) or call **509-625-6293**

### Billing

Manage your account at: [MySpokane311.org](http://MySpokane311.org)  
Speak with a representative, Monday-Friday (7 am-6 pm) at: **311 or 755-CITY** (for calls outside City limits)

### Community Participation

The Mayor recommends Water Department policy and rates to the Spokane City Council. The Council meets in-person and virtually every Monday, excluding holidays, at 6:00 p.m. Go to the: [City Council Webpage](#) for more information.



Some of our skilled and dedicated workforce at the Water Department.

## CITY OF SPOKANE WATER DEPARTMENT

509-625-7800 (24 Hours a Day)  
Email: [waterinfo@spokanecity.org](mailto:waterinfo@spokanecity.org)  
[www.SpokaneWater.org](http://www.SpokaneWater.org)



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.

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

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

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.