City of Spokane Water Department

2022 Technical Drinking Water Report

CITY OF SPOKANE – Water Department
914 E. North Foothills Dr..; Spokane, WA 99207-2794; (509) 625-7800

REPORT ON CITY OF SPOKANE DRINKING WATER FOR 2022

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

Executive Summary

Spokane's drinking water meets or exceeds all State and Federal drinking water quality standards. This annual report prepared by the City of Spokane's Water Department supports and informs our Water Department annual Consumer Confidence Report, distributed as the City of Spokane Water Quality Report. This report provides wholesale water customers, businesses, and the public with a more detailed discussion, with additional references, a complete list of the year's testing, and thorough consideration on the reasons for testing.

The City tested for 35 different inorganic parameters. There were detections of regulated chemicals; antimony, arsenic, barium, and nitrate.

The City tested the Parkwater well for 25 per and polyfluorinated alkyl substances (PFAS). There were no detection at a 2 ng/L reporting limit.

The drinking water was tested for 53 organic compounds, and none were detected.

Radionuclide testing revealed detectable levels of radon in the drinking water.

In home testing for lead and copper was performed in August of 2021. 64 homes were sampled. The highest concentration of lead in a sample was 5.46 µg/L (ppb) for lead and 111 µg/L for copper. The regulatory point is the 90th percentile sample. For lead this was 1.83 µg/L and for copper 80.9 µg/L. The homes tested had copper service lines. The City completed the removal of all known residential lead service lines in 2018.

The City disinfects the drinking water with chlorine gas, resulting in the generation of low concentrations of disinfection byproducts. The city tests for nine of these compounds quarterly. There were detections at the farthest reaches of the distribution system.

The City tests both the source water and the distribution system for microbiological contaminants. In 2022, there were no detections of total coliform in the distribution system during routine regulatory sampling. There was a detection of total coliform in the source water at Central well 1. The detection in the source water was before chlorination.

The following narrative and attachments summarize and explain recent results in more detail. Appendix V and the last two pages of this narrative (General Information) contain information relevant to the annual Consumer Confidence Report. As such, the information may be redundant relative to the main text of this report.

The detections mentioned are below applicable drinking water standards. The results were within the range of results from previous testing. Antimony, Arsenic, Barium, and radon are from naturally occurring geological sources. Nitrate is primarily from anthropogenic sources such as fertilizer and septic systems but has declined in recent years with the conversion of individual septic systems to centralized sewer systems.

Introduction and Source Water Information

All the City of Spokane's drinking water comes from the Spokane Valley-Rathdrum Prairie Aquifer - designated a sole source aquifer in 1978. The Spokane Valley-Rathdrum Prairie Aquifer slowly flows through two different states and a number of different counties and is the source water for a large number of water purveyors, including the City of Spokane. This water and any contaminants freely move across political boundaries. Many groups and/or private individuals may claim this water to be used for diverse purposes. Some of these competing interests include (but are not limited to) drinking water rights, irrigation, fisheries, hydroelectric power, and industrial processes. The Spokane Aquifer (that portion of the larger aquifer lying within Washington State) and the Spokane River exchange water. While the aquifer contains a large volume of water, many factors play into the volume of water in the Spokane River, complicating the management of these resources. Some of these factors include pumping for irrigation and potable water, hydroelectric dam operations, and the variations of weather and precipitation. Learn more about the Spokane Valley-Rathdrum Prairie Aquifer by downloading the Aquifer Atlas from www.spokanecounty.org/1227/SVRP-Aquifer-Home

The City of Spokane's Water Department delivers up to 150 million gallons of clean, safe drinking water every day to more than 249,000 people in our community. The City's water system is the fourth largest in the state of Washington based on number of connections behind Seattle, Tacoma, and Vancouver. Our water system includes pumps, reservoirs, seven source wells, and more than 1,000 miles of water mains and smaller water lines that bring water from our wells to homes and businesses**.**

Due to the porous nature of the ground surface and the number of potential contaminant sources, the possibility of contaminating the aquifer exists if good housekeeping measures are not followed for all activity over and adjacent to the aquifer. The physical and economic health of our area depends on the quality of our drinking water. To safeguard water quality, the City continues its efforts to make available to the community information about, and appropriate disposal mechanisms for, dangerous wastes that are generated in the Aquifer Sensitive Area. The City, in cooperation with other local governments and the Spokane Aquifer Joint Board, continues to work toward strengthening regulations for the storage and use of critical materials to safeguard the local water supply.

For additional information regarding the City of Spokane's drinking water or related issues:

City of Spokane Water Department	(509) 625-7800	www.spokanewater.org/
Spokane County - Water Resources	(509) 477-7579	www.spokanecounty.org/1200/Water-ResourcesA
Spokane Regional Health District – Environmental Health Div.	(509) 324-1560	www.srhd.org/programs-and-services/#-environmental-hazards-resources
Washington State Department of Health - Eastern Regional Office (Drinking Water)	(509) 329-2100	www.doh.wa.gov/YouandYourFamily/HealthyHome/DrinkingWater
Washington State Department of Ecology – Eastern Regional Office	(509) 329-3400	www.ecy.wa.gov/
U.S. EPA Safe Drinking Water Hotline	1-800-426-4791	www.epa.gov/your-drinking-water

Table 1 List of Resources

QUALITY Drinking Water
An Invaluable Community Resource

INORGANICS

The City typically has a Washington State Department of Ecology accredited laboratory run a full drinking water inorganics analysis once every three years on each of our source wells. In addition, nitrates are tested annually, as required. The most recent inorganic results for all wells from accredited laboratories are in Appendix III. **All sources are in compliance with existing National Primary Drinking Water Regulations for Inorganic Maximum Contaminant Levels (MCL)**.

ANTIMONY

In 2022 the City of Spokane performed inorganic testing at the Central and Well Electric wells. The results were 1.89 µg/L and no detection respectively. The MCL for antimony is 6 µg/L. This is the highest result for City of Spokane drinking water.

ARSENIC

The arsenic readings at Central and Well Electric wells were 3.68 µg/L, and 5.0 µg/L respectively. The MCL for arsenic is 10 µg/L, or parts per billion (ppb). For City drinking water, 5.13 µg/L of arsenic in 2009 from Ray Street Well represents the highest result to date.

City drinking water currently meets EPA's drinking water standard for arsenic. However, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's 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 a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Further information concerning health impact issues, regulatory requirements, and compliance costs for water utilities/water customers can be found at www.doh.wa.gov/Portals/1/Documents/Pubs/331-167.pdf.

BARIUM

The Barium readings in 2022 for the Central, and Well Electric wells were 0.021 mg/L, and 0.02 mg/L respectively. The MCL for Barium is 2 mg/L. For City drinking water the highest result for barium is 0.0595 mg/L from the Ray Street well in 2018.

LEAD - COPPER

Lead and copper testing of sources and at-risk residences were conducted in 2021. The highest reading of lead in a home was 5.46 µg/L (ppb). The maximum reading for copper was 111 µg/L. These results for lead and copper continue to be less than the 15 µg/L Action Level for lead and the 1300 µg/L Action Level for copper. The lead results, based on City in-home sampling, also continue to qualify our water system as having "Optimized Corrosion Control."

City drinking water currently meets EPA's drinking water standards for lead and copper. The EPA standard for lead balances the current understanding of lead health effects against the effectiveness and cost of corrosion control processes. The EPA released new rules for lead and copper testing in December of 2021 which will be effective in

October 2024. For more information on the revised lead and copper rule visit the EPA page at www.epa.gov/ground-water-and-drinking-water/review-national-primary-drinking-water-regulation-lead-and-copper

In July of 2018, the City completed its program to remove the remaining lead service lines in the City's water system. In May 2016, the City initiated a project to eliminate the final 486 lead service lines. City records indicate that originally some 981 homes built during World War II were connected to the City's distribution system with lead alloy pipes. In addition, before lead solder was banned in 1988, it was commonly used to connect copper piping in homes.

Sampling methods require testing water left sitting in lead-containing pipes, including those copper service lines with lead solder, for at least 6 hours. This results in a worst-case scenario for lead to move into the water. The City encourages anyone with this kind of plumbing, drawing water for cooking or drinking purposes, to let water run from the tap until cold before filling their container, especially if the water is to be given to infants or children.

For further information concerning lead in drinking water, you can go to www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Lead. Or the EPA at www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Further information about copper in drinking water can be found at www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Copper

Drinking water is only one of many potential sources of exposure to lead. An EPA publication titled "Protect Your Family From Lead In Your Home" can be downloaded from www.epa.gov/lead/protect-your-family-lead-your-home.

NITRATE - NITROGEN

The Ray Street Well continues to be monitored quarterly for Nitrate-N. **In 2022, the highest accredited lab quarterly result for the Ray Street Well was 3.07 mg/L,** or parts per million (ppm)**.** The federal MCL for Nitrate –N is 10 mg/L. The result from a duplicate sample analyzed by the Riverside Park Water Reclamation Facility (RPWRF) Laboratory was 3.27 mg/L. The quarterly results for Ray Street Well for 2022 are as follows:

Sample Date	*Accredited Laboratory Result - Nitrate-N, mg/L*	*RPWRF Laboratory Result – Nitrate+Nitrite-N, mg/L*
25-January-2022	2.92	3.07
24-May-2022	2.50	2.48
26-July-2022	2.79	2.54
25-October-2022	3.07	3.23

Table 2 Ray Street Well Nitrate levels

All other City sources average 1.19 mg/L for 2022, less than a fifth of the MCL for nitrate-nitrogen. The 2022 results for the other City source wells are as follows:

Source Well	*Accredited Laboratory Result - Nitrate-N, mg/L*	*RPWRF Laboratory Result – Nitrate+Nitrite-N, mg/L*
Well Electric	1.49	1.34
Parkwater	1.76	1.50
Hoffman	1.33	1.27
Grace	0.76	0.70
Nevada	0.83	0.69
Central	0.96	0.77
Federal MCL	10	

Table 3 City Source Well Nitrate levels

The following map depicts the results of monitoring wells sampled during 2022 by the Spokane County Water Resources Program. The results are for nitrate+nitrite as nitrogen from monitoring wells and springs along the Spokane River and purveyor wells over the Spokane Aquifer. Where multiple sampling events occurred at the same location, the highest result is depicted on the map. There are several wells that had results between 2.51and 4.40 mg/L. These wells, including the City of Spokane Ray Street Well, are typically located along the edge of the aquifer and appear to be subject to nitrate loading to the aquifer that originates at higher elevations.

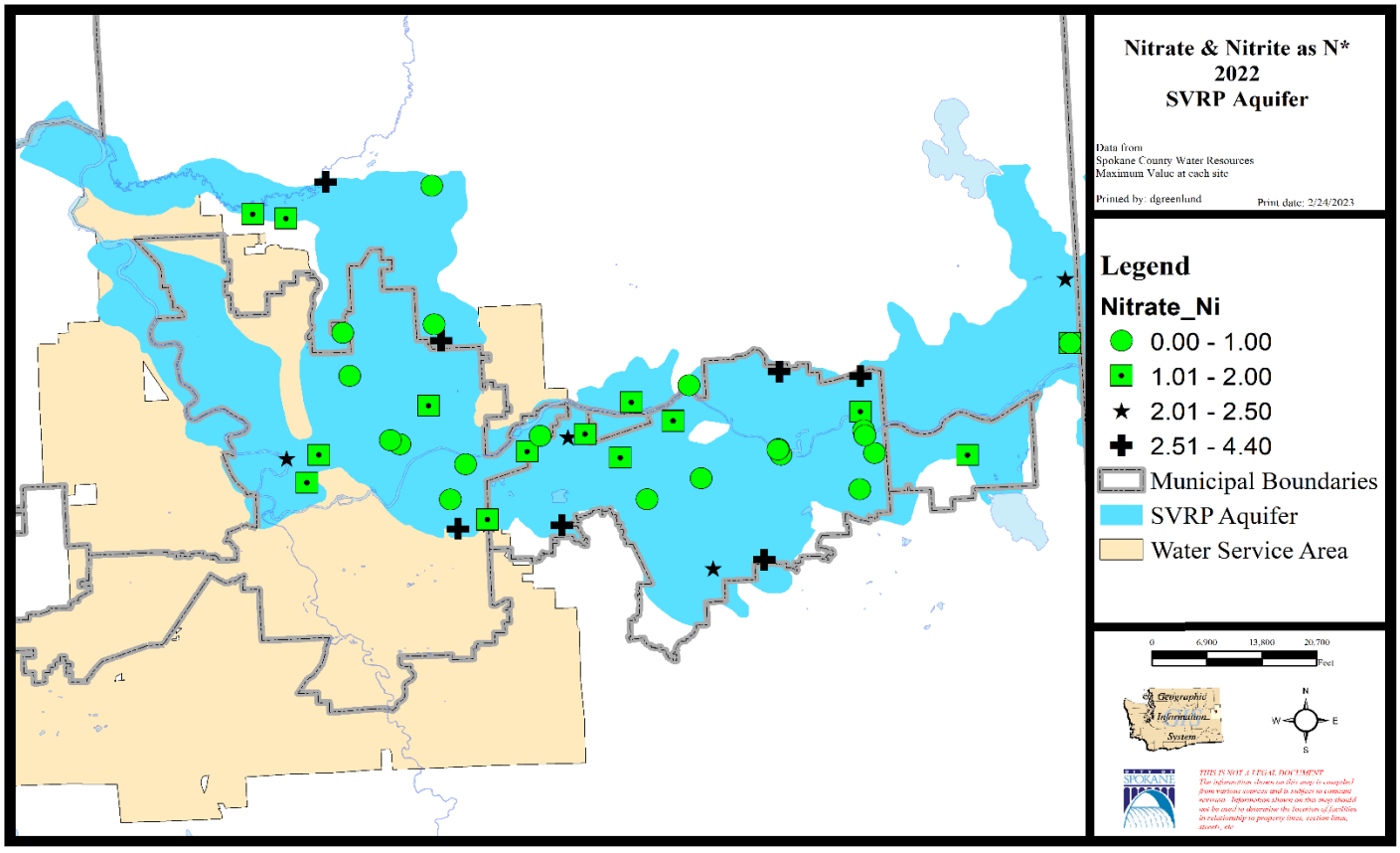


Figure 1 Aquifer Nitrate level

For further information concerning nitrate in drinking water and potential health issues, you can access the Washington State Dept. of Health website at www.doh.wa.gov/Portals/1/Documents/Pubs/331-214.pdf.
(Para ver información adicional, visite al; www.doh.wa.gov/Portals/1/Documents/Pubs/331-214s.pdf)

RADIONUCLIDES & RADON

RADIONUCLIDES

In 2022, the City of Spokane tested the Central, Hoffman, and Nevada source wells for Radium 228 and Gross Alpha. The following table has the results.

	Gross Alpha Particle Activity	Radium 228	Combined Radium 226/228 *
Central	< 3	< 0.157	1.5
Hoffman	< 3	< 0.173	1.5
Nevada	< 3	< 0.184	1.5
MCL	15		5

Table 4 Radionuclide Results

All results in picocuries per liter (pCi/L)

Gross Alpha particle activity has an MCL of 15 pCi/L. The federal MCL for Radium 226 and Radium 228 (combined) is 5 pCi/L. **The City of Spokane results were below the MCL**.

The radionuclide rule allows Gross Alpha results to be used in lieu of Radium 226 if the Gross Alpha particle activity is below 5 pCi/L. If the gross alpha particle activity result is below the detection limit, one-half of the detection limit is used to determine compliance[1]. The radionuclide rule also allows a Gross Alpha particle activity measurement to be substituted for the required uranium measurement provided that the measured gross alpha particle activity does not exceed 15 pCi/l. The Gross Alpha activity was below 15 pCi/L, so the City did not test for Uranium.

For more information on radionuclides visit the EPA at https://www.epa.gov/dwreginfo/radionuclides-rule

* If the Radium 228 or 226 value is <1.0, a value of zero will be used to calculate the Combined Radium 226/228[2].

RADON

The Water Department monitored the Central. Hoffman, and Nevada source wells for radon in 2022, with results of 420 pCi/L, 410 pCi/L, and 420 pCi/L respectively.

The Environmental Protection Agency has published a proposed rule for regulating the concentration of radon-222 in drinking water. The rule proposes a maximum contaminant level goal (MCLG) of zero, a maximum contaminant level (MCL) of 300 pCi/L, and an alternative maximum contaminant level (AMCL) of 4000 pCi/L.

Comments for the proposed rule were accepted until February 4, 2000; however no final rule was promulgated and at this time the regulatory action is not on the EPA agenda list.

Currently, water purveyors are required to inform their customers of known results for Radon-222 testing, which the City of Spokane voluntarily monitors.

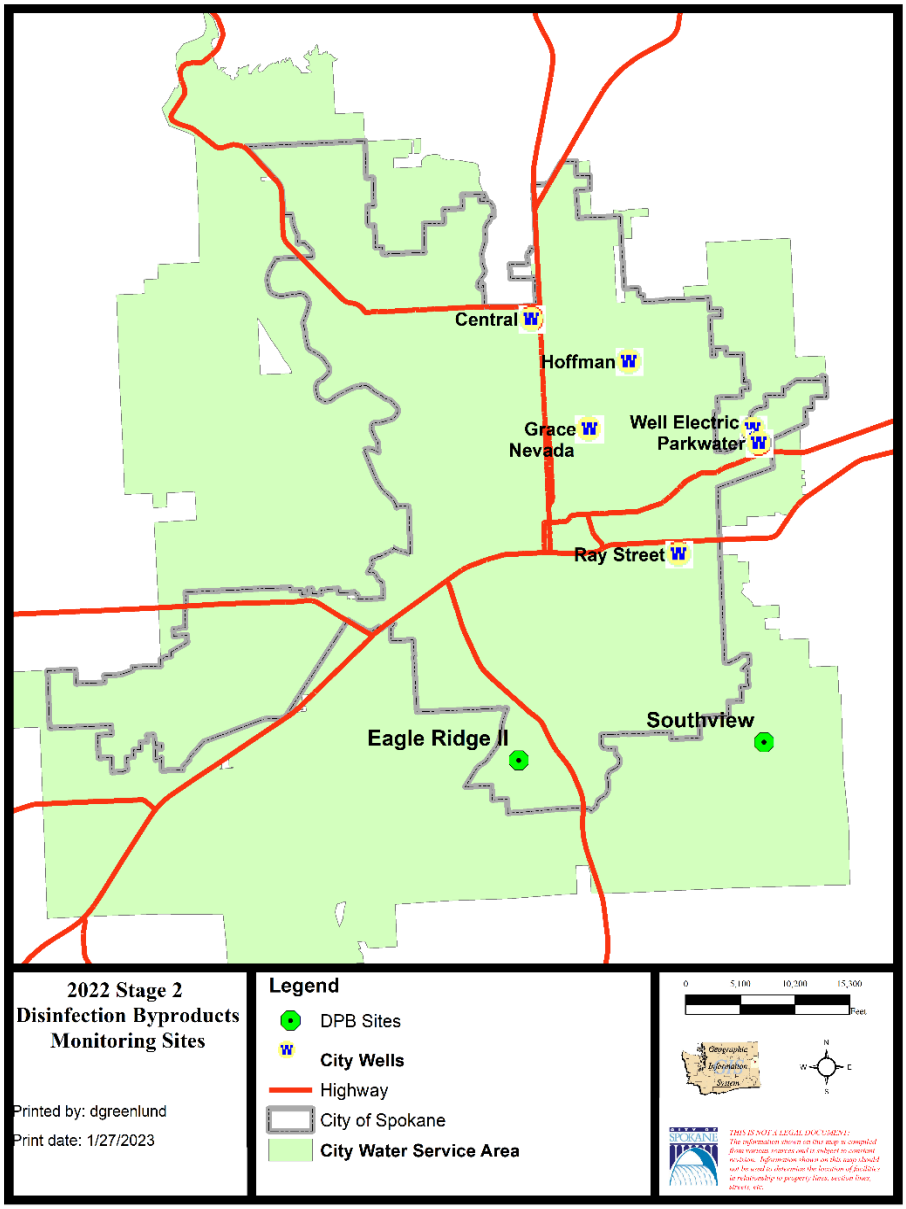
Radon gas is one of a number of radioactive elements that result from the radioactive decay of uranium found locally in natural deposits. Exposure to excessive amounts of radon may increase cancer risk. Most of these risks result from exposure to radon in indoor air. The EPA has determined that 1-2% of the radon in indoor air comes from drinking water. General information concerning radon in the environment and the associated health issues, including drinking water, can be found at www.epa.gov/radon or call the Radon Hotline at *1-800-SOS-RADON [*1-800-767-7236]. An EPA publication titled "A Citizen's Guide to Radon" can be downloaded from 2016_a_citizens_guide_to_radon.pdf (epa.gov) The EPA has published a National Radon Action Plan (https://www.epa.gov/radon/national-radon-action-plan-strategy-saving-lives) to more broadly mitigate Radon exposure.

[1] 40 CFR 141.26a (5)
[2] 40 CFR 141.26c (3) v

ORGANICS

DISINFECTION BY-PRODUCTS – DISTRIBUTION SYSTEM

The maximum value during 2022 compliance monitoring of the distribution system for total trihalomethanes (TTHM) was 3.51 µg/L and for haloacetic acids (HAA5) was no detection. This is well below the federal MCL of 80 µg/L for total trihalomethanes and 60 µg/L for the sum of five haloacetic acids. The by-products are only detected at the extreme end of the distribution system. The Stage 2 Disinfectants and Disinfection By-products Rule requires a Locational Running Annual Average (LRAA) be used for reporting compliance. This is the average of four quarterly samples for each sampling location. The City uses small amounts of chlorine as a drinking water disinfectant. However, the disinfectants themselves can react with materials in the water to form byproducts, which may pose health risks. The maximum value for TTHM was 4.39 µg/L. Appendix IV has the results for all 2022 quarterly sampling. There were no detections of haloacetic acids at any sampling sites in 2022.



In 2022, two sites were sampled every quarter. They were Eagle Ridge Two and Southview. For more information on the Stage 2 Disinfection and Distribution By-Product Rule (DPBR), go to the EPA website water.epa.gov/lawsregs/rulesregs/sdwa/stage2/index.cfm

2022 was the 12th year of sampling under the Stage 2 DPBPR. Starting in 2007 and continuing until 2010, the City Water Department performed assessment monitoring at over 20 locations (approximately five each year) to determine the potential for disinfection by-products (DBP) to be formed during the detention period in the distribution system. The DBP assessment sampling sites were selected from the existing coliform sampling sites. Based on this sampling and analysis of the retention time of water in the distribution system, locations were determined for the Stage 2 distribution system sampling program.

Figure 2 Disinfection Byproduct Monitoring Sites

Volatile Organics

In 2022, the City of Spokane tested the Grace and Hoffman well stations for Volatile Organic Compounds (VOC). There were no detections. A complete list of the chemicals analyzed is in Appendix I.

Trihalomethanes (THMs; chloroform, bromoform, bromodichloromethane, dibromochloromethane) are one group of volatile organic compounds in the test panel, disinfection by-products. They can originate from chemical interactions between a disinfectant (chlorine gas in the City's system) and any organic matter present in the raw water. **There were no detections of THMs in source water monitoring for 2022**.

Synthetic Organics

The City of Spokane did not sample for Synthetic Organic Chemicals (SOC's) in 2022. The City of Spokane tests all the wells on a three-year cycle. 2023 and 2024 are scheduled for the next sampling cycle.

Per- and polyfluoroalkyl substances (PFAS)

In February of 2022 the City tested the Parkwater well for 25 PFAS. There were no detections with a reporting limit of 2 ng/L (parts per trillion). The complete list of compounds is in Appendix I.

The City tested for PFAS under federal testing requirements of UCMR 3 in 2015. UCMR 3 had six PFAS compounds on the list of 30 chemicals sampled and analyzed. The City had no detections of the PFAS compounds. For information on UCMR 3 with the compound list, reporting limits and health effects visit the EPA at Third Unregulated Contaminant Monitoring Rule | US EPA

In January of 2022 the State of Washington adopted rules on the testing of five PFAS compounds with monitoring requirements beginning in 2023. With this rule the state implemented State Action Levels (SAL) for these five PFAS. The SALs provide state public health recommendations for the safe, long-term consumption of drinking water, below which there is no known or expected health risk. For more information on the state rule including a list of the PFAS and the SALs visit, www.doh.wa.gov/CommunityandEnvironment/Contaminants/PFAS.

The EPA is also implementing testing for PFAS. UCMR 5 will have 29 PFAS compounds. The sampling and testing is set to begin in 2024. For more information on UCMR 5 and the list of PFAS visit the EPA at www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule. The EPA is also developing rules on PFAS. For information on work the EPA is undertaking on PFAS in many areas including drinking water visit the EPA at www.epa.gov/pfas

Microbiological Contaminants

Coliform Bacteria - Source

The City of Spokane well station raw source water (the water before disinfectant chlorination) has been tested regularly for coliform bacteria. While historically there has been no requirement to test for coliform bacteria in source water, the City has monitored for this water quality parameter. More recently, testing requirements to determine whether hydraulic continuity exists with the Spokane River have increased the testing frequency. **In 2022, out of 80 tests for coliform bacteria in the City source water wells, there was one detection of total coliform and no detections of fecal coliform. The total coliform detection was 88.6 colonies per 100 ml sample at Central well on July 27, 2022.**

Out of 389 tests over the five-year period from 2018 through 2022, three positive total coliform results were found. The previous detection was in 2020. There have been no detections of fecal coliform in the source water during this time frame.

HETEROTROPHIC PLATE COUNT BACTERIA – SOURCE

In 2022, out of 76 Heterotrophic Plate Count (HPC) tests on source water, there were 13 positive results. The greatest concentration was 65 colonies per milliliter of sample at the Central well. HPC tests were conducted 359 times over the five-year period from 2018 through 2022 on raw source water. There have been 57 positive HPC results. The maximum detection during this five-year period was 65 colonies per milliliter at the Central Well in 2022. Without regard to source water HPC levels, City source water is treated with chlorine to safeguard drinking water quality. This is done based on the historical use of open reservoirs (which no longer exist) and to preserve the sanitary quality when a well or piping is open to the environment during construction, repair, or routine maintenance. Some water utilities in this area (drawing from the same aquifer) do not add any disinfectant.

COLIFORM BACTERIA - DISTRIBUTION SYSTEM

Coliform testing is typically done four days a week from various points in the distribution system. The Water Department has more than 249,000 customers. This population tier[3] requires taking 150 samples per month, which was adopted as the target for distribution system coliform monitoring by the Water Department in 2007. **During 2022, the City Water Department had 1983 coliform bacteria samples analyzed with no detections of coliform bacteria.** 1,986 coliform bacteria samples were analyzed in 2021 and, 1,994 samples were analyzed in 2020.

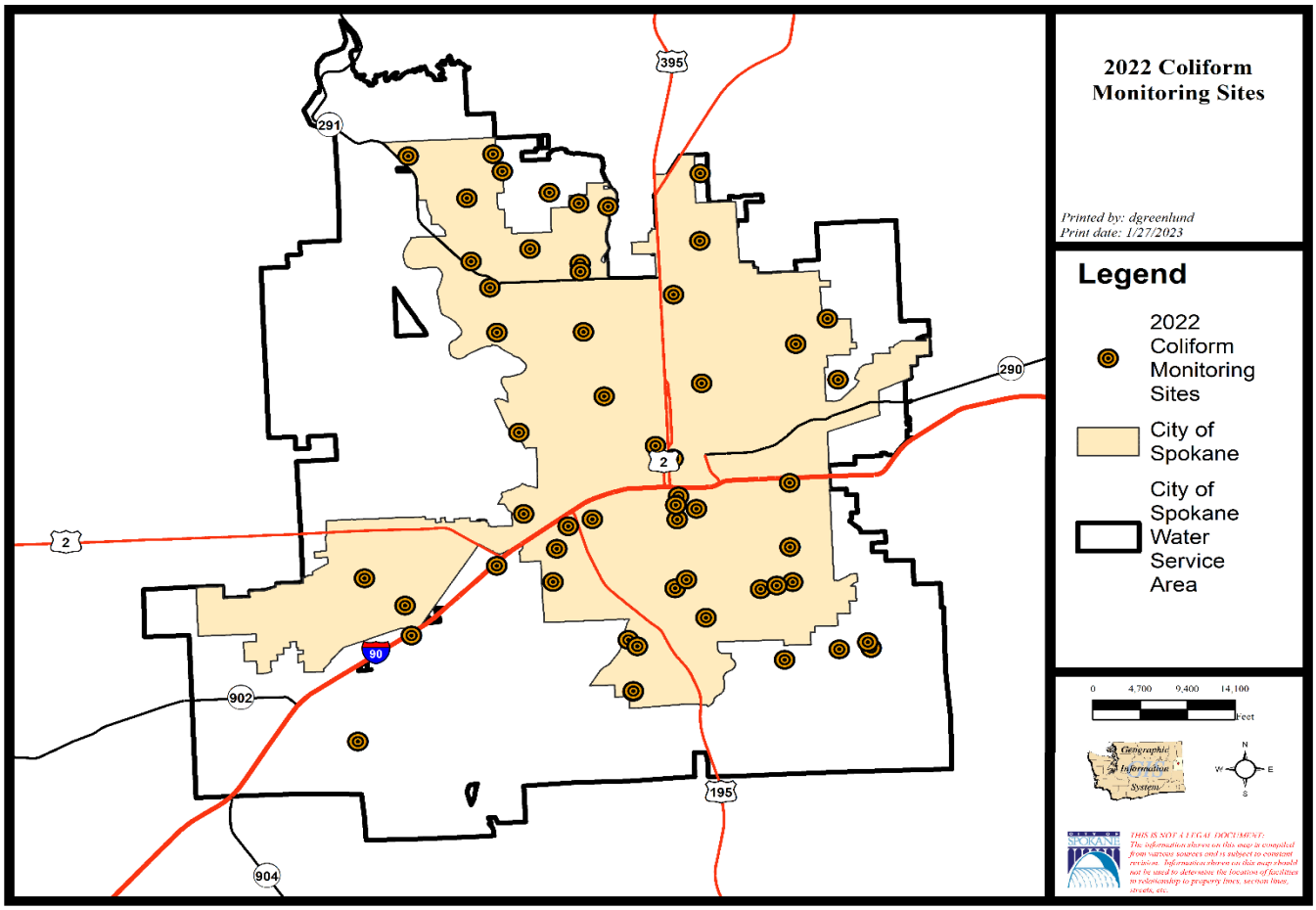


Figure 3 Coliform Monitoring Sites

[3] Ref. WAC 246-290-300 (3)(e-Table 2)

The Water Department staff has worked to refine the sampling sites for the distribution system. Concerns about inadvertent contamination of sampling sites and locations that don't adequately represent the distribution of the water system has caused the Water Department staff to establish more dedicated sampling sites at locations more representative of the entire system. Figure 3 is a map of the distribution system sampling sites during 2022, overlaid on the City's water service area. It is important to note that the sample sites are evenly placed based on the distribution system, which may not currently reach all parts of the water service area, and population density.

PROTOZOA

A number of cities and towns throughout the country, in years past, have experienced problems with giardia and/or cryptosporidium getting into the distribution systems. Most times, problems with these parasitic organisms in potable water have been associated with surface water sources. **The City is not aware of, nor has the State Department of Health indicated an awareness of, cases where infections with these organisms were traced back to the City's water system**.

Please note that cryptosporidium and other water borne organisms can be spread in many ways. People who become ill as a result of consuming giardia and/or cryptosporidium typically recover after suffering severe bouts of diarrhea. However, small children, people whose immune systems are compromised, or those who are otherwise in poor health can die because of these infections. For further information concerning the potential health effects issues, access the websites at the CDC at www.cdc.gov/parasites/crypto/index.html (cryptosporidium) and www.cdc.gov/parasites/giardia/index.html (giardia).

GENERAL INFORMATION

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.

Spanish:
Este reporte 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://espanol.epa.gov/espanol/agua)

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.

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.

Across the nation, 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 radioactive material and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- Biological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water run-off, and residential uses.
- Organic chemicals, 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 run-off and septic systems.
- Radioactive materials, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food & Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protections 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. More information about contaminants and potential health effects can be obtained by contacting the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791), on line at www.epa.gov/your-drinking-water/safe-drinking-water-hotline, or you can access additional information at EPA website: www.epa.gov/your-drinking-water

HEALTH INFORMATION

Some people may be more vulnerable to contaminants 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/CDC 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).

Additional information concerning:

Radon: During 2022, the City conducted tests at Central, Hoffman and Nevada wells for Radon-222. The results were 420 pCi/L, 410 pCi/L, and 420 pCi/L. The EPA has proposed a MCL of 300 pCi/L, which has not been finalized.

Radon is a radioactive gas that you can't see, taste, or smell and is a known carcinogen. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of 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, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call EPA's Radon Hotline (1-800-557-2366) or access the EPA website at www.epa.gov/radon/radon-hotlines-and-information-resources

Arsenic: The arsenic readings in 2022 at the Central and Well Electric wells were 3.68 and 5.00 ppb respectively. The Maximum Contaminant Level (MCL) for Arsenic is 10 ppb.

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: In-home testing for lead was performed in 2021. The City tested 65 at-risk residences for lead. The single highest result was 5.46 ppb. This result for lead is below the 15 ppb Action Level for lead**.** The lead results, based on City in-home sampling, also continue to qualify our water system as having "Optimized Corrosion Control". Source water is analyzed for lead concurrent with the in-home testing. In 2021 the maximum concentration in the source water testing of all the wells for lead was less than 0.10 ppb.

All remaining known lead service lines in the City's water system were replaced during a program from 2016 to 2018.

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 drinking 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 www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water.

CITY OF SPOKANE'S SYSTEM

All the City of Spokane's drinking water comes from the Spokane Valley-Rathdrum Prairie (SVRP) Aquifer - designated a "sole source" aquifer in 1978. The Spokane Aquifer (that portion of the SVRP aquifer lying within Washington State) and the Spokane River exchange water. The rates and locations of exchange are the subject of continued study.

Due to the porous nature of the ground surface and the number of potential contaminant sources, the possibility of contaminating the aquifer exists if good "housekeeping" measures are not followed for all activity over and adjacent to the aquifer. To safeguard water quality, the City, in coordination with other stakeholders, is currently implementing a Wellhead Protection Program. This program endeavors to inform the public about the Spokane Valley-Rathdrum Prairie Aquifer, and about appropriate disposal mechanisms for dangerous and/or critical materials that are generated in the Aquifer Sensitive Area. The program is advocating land use regulations to help protect drinking water wells from contamination.

For additional information regarding the City of Spokane's Drinking Water or related issues, you can call:

City of Spokane Water & Hydroelectric Services	509-625-7800

The Mayor recommends Water and Hydroelectric Services policy and rates to the Spokane City Council.
The Council meets most Mondays at 6:00 p.m. in the Council Chambers at
Spokane City Hall (808 W. Spokane Falls Blvd., Spokane, WA).

Appendix I - Tests Run on City of Spokane Water 20-Feb-2023

FIELD TESTS
Chlorine, Free Residual
Conductivity
Hardness
pH
Temperature
Turbidity

RADIONUCLIDES
Alpha emitters (gross)
Radon 222
Radium 228

MICROBES
BACTERIA
Total Coliform - Before & After Treatment
Fecal Coliform - Before & After Treatment
Heterotrophic Plate Count - Raw water

DISINFECTION BY-PRODUCTS
TRIHALOMETHANES
Chloroform
Bromoform
methane, Dibromochloro-
methane, Bromodichloro-
Total Trihalomethanes
FIVE HALOACETIC ACIDS (HAA5)
acetic Acid, Monochloro-
acetic Acid, Dichloro-
acetic Acid, Trichloro-
acetic Acid, Monobromo-
acetic Acid, Dibromo-

GENERAL INORGANICS
Color
Conductivity
Hardness, Total
Total Alkalinity
Total Dissolved Solids
Turbidity

INORGANIC IONS
Ammonia Nitrogen
Chloride
Cyanide
Fluoride
Nitrate Nitrogen
Nitrite Nitrogen
* Phosphorus
Sulfate

INORGANIC METALS
Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Calcium
Chromium
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Sodium
Thallium
Zinc

VOLATILE ORGANICS
Benzene
benzene, 1,2,3-Trichloro-
benzene, 1,2,4-Trichloro-
benzene, 1,2,4-Trimethyl-
benzene, 1,3,5-Trimethyl-
benzene, Bromo-
benzene, Butyl-
benzene, Chloro-
benzene, Ethyl
benzene, Isopropyl-
benzene, m-Dichloro-
benzene, o-Dichloro-
benzene, p-Dichloro-
benzene, Propyl-
benzene, sec-Butyl-
benzene, tert-Butyl-
Butadiene, Hexachloro-
Chloride, Carbon Tetra-
Chloride, Methylene (aka methane, dichloro)
Chloride, Vinyl
Chloroform (Freon 20)
ethane, 1,1,1,2-Tetrachloro-
ethane, 1,1,1-Trichloro-
ethane, 1,1,2,2-Tetrachloro-
ethane, 1,1,2-Trichloro-
ethane, 1,1-Dichloro-
ethane, 1,2-Dichloro-
ethene, 1,1-Dichloro-
ethene, cis-1,2-Dichloro-
ethene, Tetrachloro-
ethene, trans-1,2-Dichloro-
ethene, Trichloro-
methane, Bromo-
methane, Bromochloro-
methane, Chloro-
methane, Dibromo-
methane, Dichlorodifluoro-
methane, Trichlorofluoro- (Freon 11)
Naphthalene
propane, 1,2,3-Trichloro-
propane, 1,2-Dichloro-
propane, 1,3-Dichloro-
propane, Dibromochloro- (DBCP)
propene, 1,1-Dichloro-
propene, 1,3-Dichloro-
Styrene
Toluene
toluene, o-Chloro-
toluene, p-Chloro-
toluene, p-Isopropyl-
Xylene, m&p-
Xylene, o-
Xylene, total

* - Typically run by the City's Wastewater Laboratory only

Appendix I (continued)

SYNTHETIC ORGANICS

Acenaphthylene
Acifluorfen
Adipate, Di-(2-ethylhexyl)
Alachlor
Aldicarb
Aldicarb Sulfone
Aldicarb Sulfoxide
Aldrin
Anthracene
Anthracene, Benz(a)-
Arochlor 1016
Arochlor 1221
Arochlor 1232
Arochlor 1242
Arochlor 1248
Arochlor 1254
Arochlor 1260
Atrazine
Bentazon
benzene, Hexachloro-
benzoic acid, 3,5-Dichloro-
Bromacil
Butachlor
Carbaryl
Chlordane
Chrysene
D, 2,4-
Dalapon
DB, 2,4-
DCPA (Dacthal)
DDD, 4,4-
DDE, 4,4-
DDT, 4,4-
Diazinon
Dicamba
Dichlorprop
Dieldrin
Dinoseb
Endrin
EPTC
Ethylene Dibromide
Fluoranthene, Benzo(b)
Fluoranthene, Benzo(k)
Fluorene
furan, Carbo-
Glyphosate
Heptachlor
Heptachlor Epoxide
Lindane
Methomyl
Methoxychlor
Metolachlor
Metribuzin
Molinate
Oxamyl
pentadiene, Hexachlorocyclo-
phenol, Pentachloro-
phenyls, Polychlorinated Bi- (PCB, total Arochlor)
phthalate, Butylbenzyl-
phthalate, Di-(2-Ethylhexyl)-
phthalate, Di-n-Butyl-
phthalate, Diethyl
phthalate, Dimethyl-
Picloram
Propachlor
Pyrene
pyrene, Benzo a-
Simazine
T, 2,4,5-
Terbacil
Toxaphene
TP, 2,4,5-
Trifluralin

PFAS COMPUNDS

PFOA Perfluorooctanoic acid
PFOS Perfluorooctanesulfonic acid
PFHxS Perfluorohexanesulfonic acid
PFNA Perfluorononanoic acid
PFBS Perfluorobutanesulfonic acid
PFHpA Perfluoroheptanoic acid
PFHxA Perfluorohexanoic acid
PFDA Perfluorodecanoic acid
PFUnA Perfluoroundecanoic acid
PFDoA Perfluorododecanoic acid
ADONA 4,8-Dioxa-3H-perfluorononanoic acid
9Cl-PF3ONS
HFPO-DA Hexafuoropropylene oxide dimer acid
11Cl-PF3OUdS
4:2FTS 1H,1H,2H,2H-Perfluorohexane sulfonic acid
6:2FTS 1H,1H,2H,2H-Perfluorooctane sulfonic acid
8:2FTS 1H,1H,2H,2H-Perfluorodecane sulfonic acid
NFDHA Nonafluoro-3,6-dioxaheptanoic acid
PFBA Perfluorobutanoic acid
PFHpS Perfluoroheptanesulfonic acid
PFMBA Perfluoro-4-methoxybutanoic acid
PFMPA Perfluoro-3-methoxypropanoic acid
PFPeA Perfluoropentanoic acid
PFPeS Perfluoropentanesulfonic acid
PFEESA Perfluoro(2-ethoxyethane) sulfonic acid

* - Typically run by the City's Wastewater Laboratory only

Appendix II - Annual Testing Summary - Tests Run on City of Spokane Water 20-Feb-2023

2022 DRINKING WATER SOURCE - COMPLETED QUARTERLY MONITORING

	SOURCE #	8	6	5	1	3	4	2
	WELL	CENTRAL	GRACE	HOFFMAN	NEVADA	PARKWATER	RAY STREET	WELL ELECTRIC
BACTERIA								
COLIFORM - RAW SOURCE *								
Total Coliform -number of samples per year / number of positive detections		10 / 0	6 / 0	6 / 0	8 / 0	12 / 0	11 / 0	24 / 0
E. coli - number of samples per year / number of positive detections		10 / 0	6 / 0	6 / 0	8 / 0	12 / 0	11 / 0	24 / 0
HETEROTROPHIC PLATE COUNT - RAW SOURCE *								
number of samples per year / greatest result value		10 / 68	6 / 0	6 / 0	8 / 0	12 / 5	11 / 1	24 / 1
* All operating wells are typically sampled once per month								
INORGANIC								
FULL LIST- ACCREDITED LAB (phase II & V included)	3rd Qtr - Jul	completed-see App. III						completed-see App. III
NITRATE	1st Qtr - Jan						2.92	
	2nd Qtr - April						2.5	
	3rd Qtr - Jul	0.96	0.76	1.33	0.83	1.76	2.79	1.49
	4th Qtr - Oct						3.01	
NITRATE + NITRITE - RPWRF LAB	1st Qtr - Jan						3.07	
	2nd Qtr - April						2.48	
	3rd Qtr - Jul	0.77	0.70	1.27	0.69	1.50	2.54	1.34
	4th Qtr - Oct						3.23	
ORGANIC								
VOLATILES	1st Qtr - Jan							
(including TRIHALOMETHANES)	2nd Qtr - April							
	3rd Qtr - Jul		no detections	no detections				
	4th Qtr - Oct							
SYNTHETIC ORGANICS (515.1, 525.2, 531.1)	1st Qtr - Jan							
	2nd Qtr - April							
	3rd Qtr - Jul							
	4th Qtr - Oct							
RADIOACTIVE CONTAMINANTS								
Radium 228 - pCi/L,	2nd Qtr - April	< 0.157		< 0.173	< 0.184			
Gross Alpha - pCi/L	2nd Qtr - April	< 3		< 3	< 3			
Radon - pCi/L	2nd Qtr - April	420		410	420			

Appendix III - Drinking Water Inorganics Summary

CITY OF SPOKANE 20-Feb-2023

DRINKING WATER INORGANICS SUMMARY

MOST RECENT WELL STATION MONITORING ANALYTICAL RESULTS

ACCREDITED LABORATORIES

								Maximum Contaminant Levels		CURRENT DATA SUMMARY			
WELL STATION	CENTRAL	ELECTRIC	GRACE	HOFFMAN	NEVADA	PARKWATER	RAY	MCL's**	Goals MCLG's	MEAN	MAX	MIN	COUNT
SAMPLING DATE	26-Jul-2022	26-Jul-2022	28-Jul-2020	28-Jul-2020	27-Jul-2021	27-Jul-2021	27-Jul-2021						
LABORATORY	(Anatek)	(Anatek)	(Anatek)	(Anatek)	(Anatek)	(Anatek)	(Anatek)						
ALKALINITY	112	124	83.5	123	84	138	150	unregulated		116	150	83.5	7
HARDNESS (as CaCO3) #	111	120	87.1	126	102	153	197	unregulated		128	197	87.1	7
CONDUCTIVITY (µmos/cm)	247	275	195	280	228	346	431	700 t		286	431	195	7
TURBIDITY (NTU)	0.127	< 0.1	0.205	0.228	0.185	0.162	0.176	1 t		0.155	0.228	0.127	7
COLOR (color units)	< 5.00	< 5.00	< 5	< 5	< 5.00	< 5.00	< 5.00	15 s			< 5.00	< 5.00	7
CHLORIDE	6.08	7.24	5.52	7.1	5.68	7.86	19.6	250 s		8.4	19.6	5.52	7
TOT. DISSOLVED SOLIDS	183	206	221	280	91	190	212	500 s		198	280	91	7
MAGNESIUM	not tested	not tested	7.7	14.3	8..07	15.1	13.9	unregulated		10.2	15.1	7.7	5
CALCIUM	not tested	not tested	23.5	30	24.2	34.2	46.7	unregulated		32	46.7	23.5	5
ORTHO-PHOSPHATE	not tested	not tested	not tested	not tested	not tested	not tested	not tested	unregulated		N/A	N/A	N/A	0
AMMONIA	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	unregulated			< 0.02	< 0.02	7
CYANIDE	< 0.005	< 0.005	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	0.2	0.2		< 0.05	< 0.005	7
FLUORIDE	< 0.032	< 0.032	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2 s	4		< 0.1	< 0.032	7
NITRATE (NO3-N)	0.96	1.49	0.65	1.39	0.789	1.4	2.4	10	10	1.30	2.4	0.645	7
NITRITE (NO2-N)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1	1		< 0.1	< 0.1	7
SILICA (SI02)	10.5	10.8	12.1	12.3	not tested	not tested	not tested	unregulated		11.4	12.3	10.5	4
SULPHATE	10.8	10.8	6.59	12.5	7.13	13.5	12.7	250 s	400	10.6	13.5	6.6	7
ALUMINUM	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05 - 0.2 s			< 0.01	< 0.01	7
ANTIMONY	0.00189	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.006	0.006		0.00189	< 0.001	7
ARSENIC	0.00368	0.005	0.00264	0.00278	0.00227	0.00291	0.00353	0.010	0	0.0033	0.005	0.00227	7
BARIUM	0.0214	0.0197	0.0151	0.0243	0.0173	0.025	0.0487	2	2	0.0245	0.0487	0.0151	7
BERYLLIUM	< 0.0003	< 0.0003	< 0.001	< 0.001	< 0.0003	< 0.0003	< 0.0003	0.004	0.004		< 0.001	< 0.0003	7
CADMIUM	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.005	0.005		< 0.001	< 0.001	7
CHROMIUM	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1	0.1		< 0.001	< 0.001	7
COPPER	0.00168	0.00426	0.00299	< 0.001	0.0119	0.00312	0.00501	TT	1.3	0.0048	0.0119	0.00168	7
IRON	< 0.01	< 0.01	0.011	0.0149	0.0323	< 0.01	0.065	0.3 s		0.0308	0.065	< 0.01	7
LEAD	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	TT	0		< 0.001	< 0.001	7
MANGANESE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.05 s			< 0.001	< 0.001	7
MERCURY	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.002	0.002		< 0.0001	< 0.0001	7
NICKEL	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1 * * *	0.1 * * *		< 0.001	< 0.001	7
SELENIUM	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.05	0.05		< 0.001	< 0.001	7
SILVER	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1 s			< 0.1	< 0.001	7
SODIUM	2.76	3.65	2.65	3.28	2.81	4.23	8.27	unregulated		4.0	8.27	2.65	7
THALLIUM	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.0005		< 0.001	< 0.001	7
ZINC	0.00467	0.00141	< 0.001	0.00182	0.00216	0.00127	0.00233	5 s		0.00228	0.00467	0.00127	7

RESULTS ARE IN mg/L EXCEPT WHERE OTHERWISE NOTED

* TT = Treatment Technique; s = Secondary MCL; t = State only MCL

* * Aluminum is a secondary regulated contaminant

* * * The MCL and MCLG for Nickel were remanded on February 9, 1995, monitoring requirements still in effect

divide by 17.1 to convert to grains per gallon

Appendix IV - Disinfection Byproducts - Distribution System

Distribution System Sampling for Disinfection Byproducts

Reported 20-Feb-2023

Location	Southview	Eagle Ridge II	Southview	Eagle Ridge II	Southview	Eagle Ridge II	Southview	Eagle Ridge II	Southview	Eagle Ridge II	MAXIMUM CONTAMINANT LEVELS (MCL)
Date	9-Feb-2021	9-Feb-2021	13-May-2021	13-May-2021	11-Aug-2021	11-Aug-2021	10-Nov-2021	10-Nov-2021	10-Feb-2022	10-Feb-2022	
Organics Lab	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	
Total Chlorine Residual, mg/L	0.26	0.29	0.21	0.37	0.19	0.26	0.19	0.22	0.24	0.25	
TRIHALOMETHANES, results micrograms/L											
Chloroform	**0.59**	<0.2	**0.37**	<0.2	**0.2**	<0.2	**0.43**	**0.53**	**0.37**	**0.3**	
Bromodichloromethane	**1.21**	**0.66**	**0.8**	<0.5	**0.6**	<0.5	**0.98**	**0.79**	**0.74**	**0.55**	
Dibromochloromethane	**1.42**	**0.84**	**1.27**	<0.5	**1.37**	<0.5	**1.47**	**0.96**	**0.95**	**0.71**	
Bromoform	**0.66**	<0.5	**0.62**	<0.5	**1.1**	<0.5	**0.89**	**0.5**	**0.55**	<0.5	
TOTAL TRIHALOMETHANES	**3.88**	**1.5**	**3.06**	<0.2	**3.27**	<0.2	**3.77**	**2.78**	**2.61**	**1.56**	80
LRAA	**3.78**	**0.88**	**3.55**	**0.71**	**3.41**	**0.71**	**3.5**	**1.07**	**3.18**	**1.09**	
HALOACETIC ACIDS (HAA5), results micrograms/L											
Chloroacetic acid	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	
Bromoacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Di-Chloroacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Tri-Chloroacetic acid\	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Di-Bromoacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
TOTAL HAA (5)	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	60
Chloro,bromoacetic acid *	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	

Results are in μg/L (ppb) except where otherwise noted
* State Unregulated
Prepared by Water Department

Distribution System Sampling for Disinfection Byproducts

Location	Southview	Eagle Ridge II	Southview	Eagle Ridge II	Southview	Eagle Ridge II	MAXIMUM CONTAMINANT LEVELS (MCL)
Date	12-May-2022	12-May-2022	11-Aug-2022	11-Aug-2022	11-Aug-2022	11-Aug-2022	
Organics Lab	Anatek	Anatek	Anatek	Anatek	Anatek	Anatek	
Total Chlorine Residual, mg/L	0.21	0.34	0.23	0.31	**0.19**	**0.22**	
TRIHALOMETHANES, results micrograms/L							
Chloroform	**0.43**	**0.26**	**0.27**	**0.26**	**0.53**	**0.5**	
Bromodichloromethane	**0.95**	<0.5	**0.7**	<0.5	**1.03**	**0.7**	
Dibromochloromethane	**1.61**	**0.54**	**1.23**	**0.52**	**1.16**	**0.76**	
Bromoform	**1.4**	<0.5	**0.92**	<0.5	**0.74**	<0.5	
TOTAL TRIHALOMETHANES	**4.39**	**0.8**	**3.12**	**0.78**	**3.46**	**1.96**	80
LRAA	**3.51**	**1.29**	**3.47**	1.48	**3.4**	**1.28**	
HALOACETIC ACIDS (HAA5), results micrograms/L							
Chloroacetic acid	< 2	< 2	< 2	< 2	< 2	< 2	
Bromoacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	
Di-Chloroacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	
Tri-Chloroacetic acid\	< 1	< 1	< 1	< 1	< 1	< 1	
Di-Bromoacetic acid	< 1	< 1	< 1	< 1	< 1	< 1	
TOTAL HAA (5)	< 1	< 1	< 1	< 1	< 1	< 1	60
Chloro,bromoacetic acid *							

Results are in μg/L (ppb) except where otherwise noted
* State Unregulated
Prepared by Water Department

CONTAMINANTS FOUND IN DRINKING WATER TESTING IN 2022
CITY OF SPOKANE, WATER & HYDROELECTRIC SERVICES

Data presented, if not from 2022, is from the most recent testing done in accordance with the regulations.

SOURCE WATER TESTING CONTAMINANT	Units	Highest Average	Detected Maximum	Detected min.	Number Positive Samples	Number of Samples	MCL	MCLG	MAJOR SOURCES
Antimony	µg/L	**(a)**	1.89	< 1	1	2	**6**	**6**	**Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder**
Arsenic	µg/L	**(a)**	**5.0**	**3.7**	**2**	**2**	**10**	**0**	**Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes**
Barium	mg/L	**(a)**	**0.05**	**0.02**	**2**	**2**	**2**	**2**	**Erosion of natural deposits; Discharge of drilling waste; discharge from metal refineries**
Nitrate	mg/L	**(a)**	**3.01**	**0.76**	**10**	**10**	**10**	**10**	**Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits**

DISTRIBUTION SYSTEM TESTING CONTAMINANT	Units	LRAA	Detected Maximum	Detected min.	Number Positive Samples	Number of Samples	MCL	MCLG	MAJOR SOURCES
Disinfection Byproducts - TTHMs [Total Trihalomethanes]	µg/L	**3.51**	**4.39**	**0.78**	**8**	**8**	**80**	**0**	**By-product of drinking water disinfection**

CONTAMINANT		Date sampled	90th Percentile (c)	Number of Sites exceeding AL	Number Positive Samples	Number of Samples	MCL	MCLG	MAJOR SOURCES
Copper (b)	mg/L	**Aug-21**	**0.08**	**0**	**64**	**64**	**TT, AL= 1.3**	**1.3**	**Corrosion of household plumbing systems; Erosion of natural deposits: Leaching from wood preservatives**
Lead (b)	µg/L	**Aug-21**	**1.83**	**0**	**63**	**64**	**TT, AL= 15**	**0**	**Corrosion of household plumbing systems; Erosion of natural deposits**

Notes

(a) Compliance with MCL is determined by single sample results, so no average is used.

(b) Faucet samples were from 'at risk' homes (those with lead service lines and those with copper pipes with lead solder joints).

(c) 90% of at-risk homes had this concentration, or less, of lead/copper.

Key to Table

AL = Action Level = The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

LRAA = Locational Running Annual Average

MCL = Maximum Contaminant Level = The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

pCi/L = picocuries per liter (a measure of radioactivity)