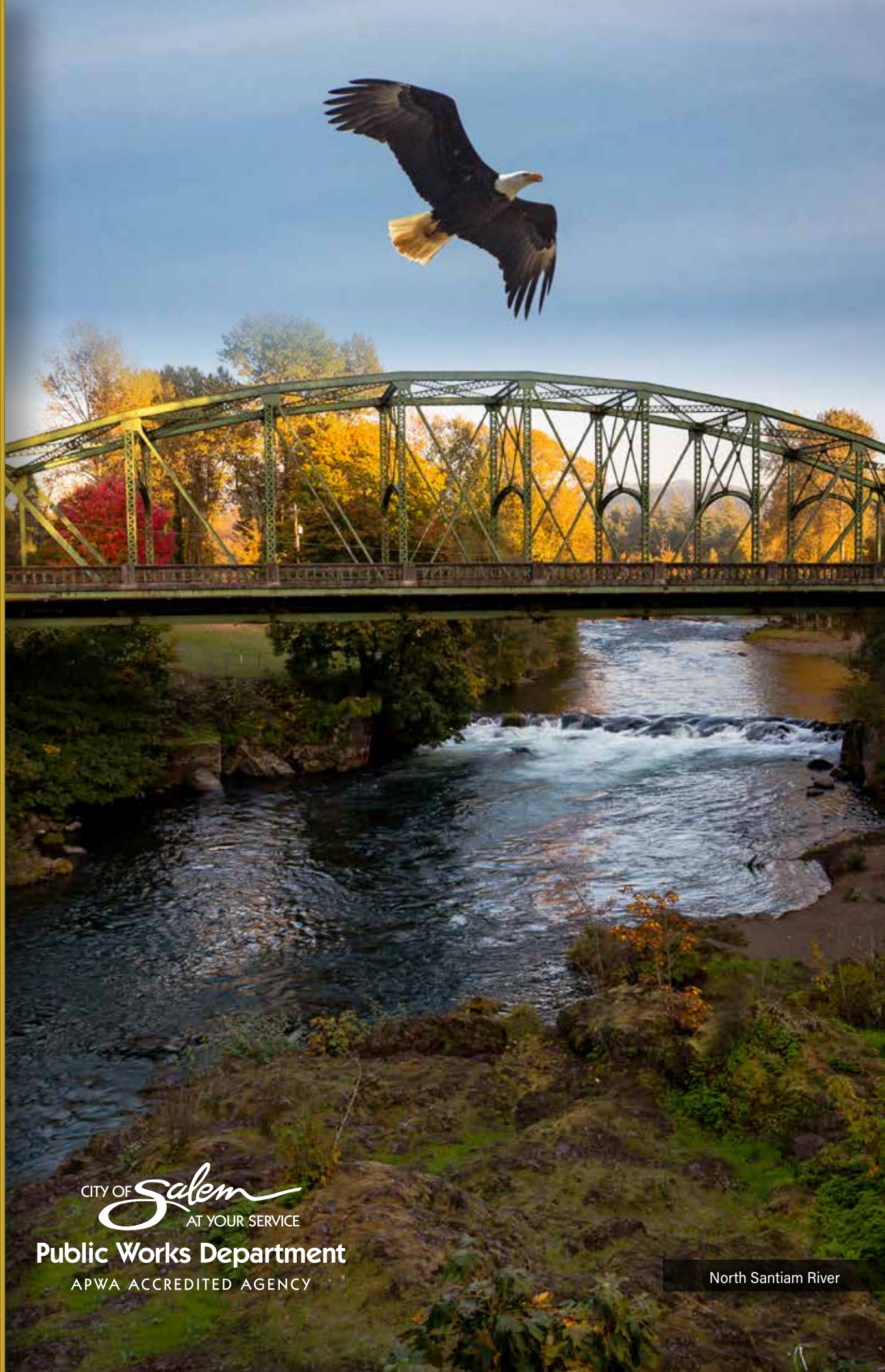
2024 ANNUAL WATER QUALITY REPORT

Drinking Water Quality Data from 2023

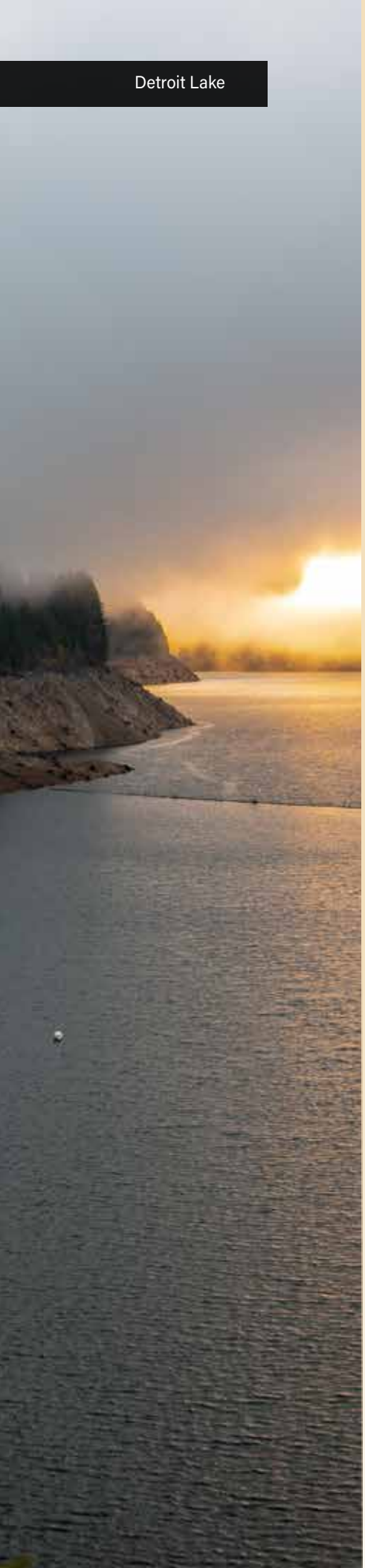


CITY OF Salem
AT YOUR SERVICE

Public Works Department

APWA ACCREDITED AGENCY

North Santiam River



Detroit Lake

To our valued customers,

I am delighted to present the 2024 Annual Water Quality Report. This report contains crucial information about your drinking water, including its source, treatment processes, and any contaminants present. While many sections of the report are mandated by the Environmental Protection Agency (EPA), the City of Salem is proud to provide an extensive report that covers additional topics necessary for our customers to understand their drinking water system.

In 2023, Geren Island Water Treatment Plant Operators produced 10.66 billion gallons of water, a 5.2% increase from 2022. This high-quality water met or exceeded over 120 drinking water standards set by the Oregon Health Authority and the EPA, protecting our community's public health.

During the past year, the city implemented improvements at the Geren Island Water Treatment Facility, including converting a slow sand filter from a pre-filter into a finished water filter. Additionally, the Southeast Collector Well project was completed. Furthermore, two pumps at the Aquifer Storage and Recovery (ASR) Well system in Woodmansee Park, South Salem, were rehabilitated. Moreover, Water Distribution maintenance crews responded to 3,096 service requests, installed 345 new water services, and repaired 108 leaks in water mains and services. Our Water Quality Staff collected over 1,440 bacteriological samples from locations around Salem. Other sampling includes: Inorganic Compounds (IOCs), Volatile Organic Compounds (VOCs), Synthetic Organic Compounds (SOCs), Lead/Copper, radiological compounds, disinfection byproduct compounds, and cyanotoxins. These samples are collected from the North Santiam Watershed, Geren Island Water Treatment Facility, the entry point of the distribution system, the Aquifer Storage and Recovery (ASR) wells, and the distribution system.

Water is the most valuable natural resource globally, and the City of Salem is fortunate to possess a quality and abundant source. It's easy to overlook the significance of this precious resource once one becomes aware of the challenges faced by other regions in the United States and around the world with their water supplies. Even with a reliable water source, ensuring its quality requires a robust treatment process, operation, and maintenance of extensive infrastructure, including hundreds of miles of underground water mains, pump stations, reservoirs, and dedicated staff. All this is accomplished by delivering water to each residential customer at less than a penny per gallon.

As always, the City of Salem remains committed to delivering high-quality water to your tap and providing prompt service to our valued customers. For more information about Salem's drinking water, please visit www.cityofsalem.net.

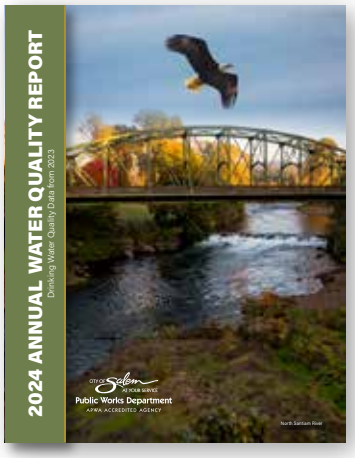
Respectfully,
Dwayne Barnes

Utility Operations Manager
City of Salem Public Works Department
503-588-6311

New Message

To City of Salem Cc Bcc

Subject Annual Water Quality Report



Annual Water Quality Report Continues to Be Delivered Electronically

The City of Salem continues to provide the Annual Water Quality Report via electronic delivery to Salem water customers. Electronic delivery allows for faster access and significantly reduces printing and mailing costs.

Printed copies are available at the Salem Civic Center or you can request one be mailed to you by calling (503) 588-6311.

The average person uses around 90 gallons of water per day, and around 32,850 gallons a year.

The City of Salem was in violation of a delivery deadline for the 2023 Annual Water Quality Report. The deadline to deliver the Annual Water Quality Report, also known as the Consumer Confidence Report is annually on July 1. The report must be available to the public and a copy sent to the Oregon Health Authority Drinking Water Services by this date. While the report was available to the public by July 1, Oregon Health Authority Drinking Water Services did not receive a copy of the report until July 7, 2023.

To prevent this in the future, the City will now publish the report on June 1. This violation is solely related to reporting and there are no adverse health effects associated.

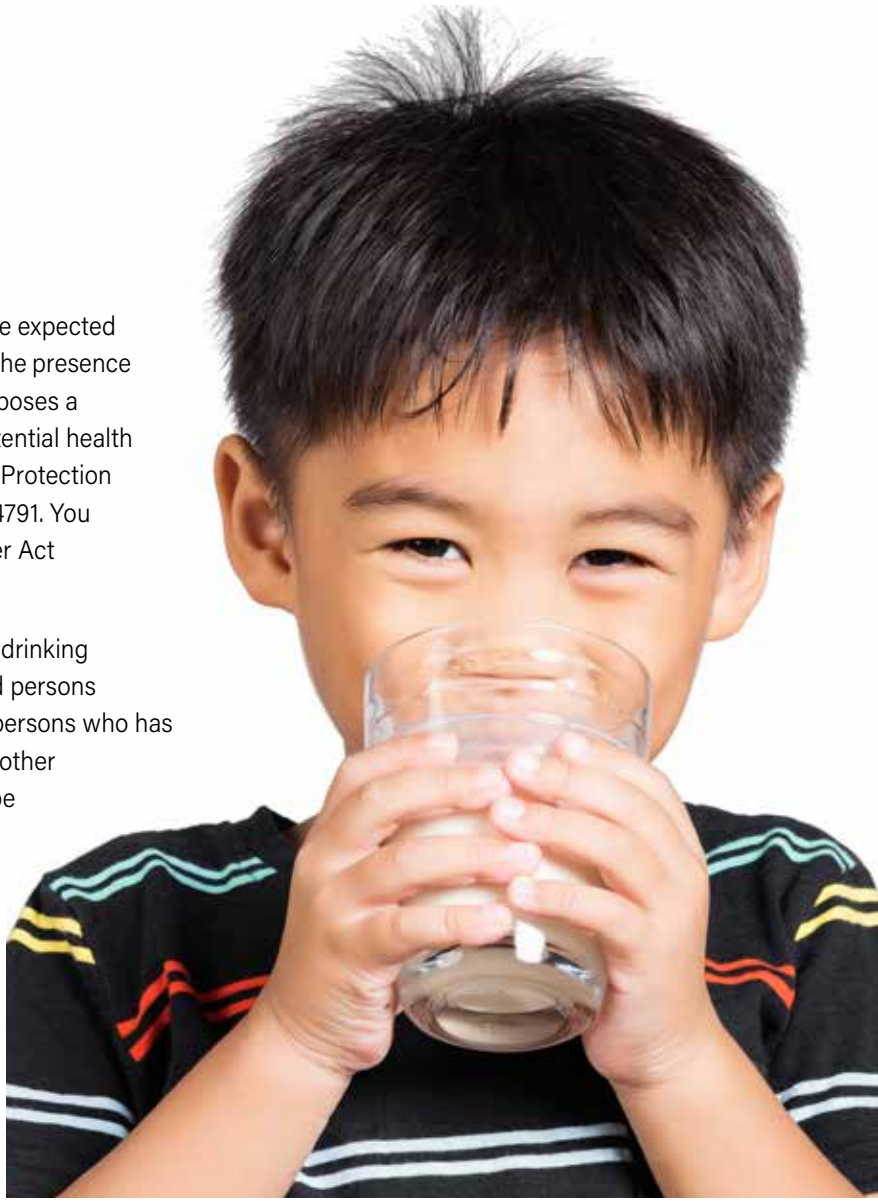
For more information about this notice contact Dwayne Barnes the Utility Operations Manager for the City of Salem Public Works Department at 503-588-6311.

Important Information Regarding Drinking Water

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 calling the U.S. Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791. You can also submit questions on the EPA Safe Drinking Water Act Hotline webpage.

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 has undergone an organ transplant, 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.

The EPA and Centers for Disease Control (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 at 1-800-426-4791.



Please Share!

If you are a manager or owner of a business or multi-family dwelling, please share this report with your employees or residents.

For additional copies, please call the City of Salem Public Works Dispatch at 503-588-6311.

Español?

Este documento contiene información sobre su agua potable y su fuente. Si desea recibir una copia de este documento en español, llame al Despacho de Obras Públicas de la Ciudad de Salem al 503-588-6311 y solicite un informe de calidad del agua o visite nuestro sitio web www.cityofsalem.net/water

This document contains information about your potable water and its source. If you would like to receive a copy of this document in Spanish, please call the City of Salem Public Works Dispatch at 503-588-6311 and ask for a water quality report or visit our website at www.cityofsalem.net/water

What the EPA Wants You to Know About Contaminants in Source Water

The sources of drinking water, both tap water and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in any source water includes:

Sediments and turbidity - including loose dirt, topsoil, minerals, sand and silt from roads and highways, excessive removal of vegetation from grazing animals, forest practices, and farming practices.

Microbial contaminants, such as viruses and bacteria, which comes from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, road maintenance, individual homes and businesses, and urban stormwater runoff.

Organic chemical contaminants, including synthetic and volatile chemicals, which are by-products of industrial processes, petroleum processes, wood processes and mills, gas and fueling stations, auto and mechanical shops.

Inorganic contaminants, such as salts and metals, which can occur natural in the geology, or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas productions, mining, or agriculture.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production, and mining activities.

In order to ensure that the drinking water from your tap is safe, the EPA has regulations that limit the amount of certain contaminants in the water provided by public water systems. This requires monitoring for these contaminants. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Understanding Salem's Source Water Assessment

The City of Salem's Source Water Assessment was originally completed in 2003 with assistance from the Oregon Department of Environmental Quality (ODEQ). In 2018, ODEQ completed an Updated Source Water Assessment to all drinking water providers in the state of Oregon. As required by the Federal Safe Drinking Water Act, the original assessment identifies sensitive areas where the water supply may be more vulnerable to impact by potential contaminant sources.

The North Santiam River is Salem's primary drinking water supply. The updated assessment provides additional detailed information to assist drinking water providers and their communities in implementing local drinking water protection efforts. This information may assist with supporting restoration projects that focus on goals such as improving water quality and watershed health within the North Santiam River Watershed.

Contaminants in Drinking Water

The City routinely tracks activities that may impact its drinking water source within the North Santiam River Watershed. The City works together with federal, state and local agencies, as well as researchers, nonprofits and individuals to explore watershed health and reduce negative impacts to the drinking water source. Throughout the year, City employees regularly collect water samples and monitor water quality at various sites within Salem's drinking water distribution system, various stages throughout water treatment process, and the water supply throughout the watershed. The City is committed to delivering high-quality water to its customers.

Salem's original and updated Source Water Assessment reports are available on the City of Salem website at: www.cityofsalem.net/water. The reports are also available by calling Public Works Dispatch at 503-588-6311, or by emailing a request to water@cityofsalem.net

Salem's Source for Drinking Water

For more than 80 years, the North Santiam River has served as the primary water supply for the City of Salem. This high quality source water flows over 90 miles from the high ridges near Mt. Jefferson, through Detroit Reservoir and down toward the Mid-Willamette Valley where it meets with the South Santiam before the Willamette River. The North Santiam Watershed covers about 760 square miles of private, state and national forest. The large area of undeveloped forested land surrounding the watershed is one reason the river provides such high quality water for many canyon communities along its route. This high quality water from the watershed is suitable for a more natural filtering method called Slow Sand Filtration at the Geren Island Water Treatment Facility located near Stayton. The City of Salem has been using this process since the 1930s, while making improvements to the facility and treatment process as needed over time.

In the summer of 2022, an ozone treatment facility was added to the treatment process for a 24 hour - 7 day a week treatment schedule. The ozone treatment system provides an added treatment barrier to ensure that high quality water is continuously delivered to Salem water customers. This significant infrastructure improvement results in a more resilient drinking water treatment system and can remove contaminants such as cyanotoxins and dissolved materials in the water.

During normal operations, North Santiam River water is diverted, filtered twice using the slow sand filters, and ozonated. Water is further disinfected by adding sodium hypochlorite (liquid chlorine), fluorosilicic acid (liquid fluoride), and sodium carbonate (soda ash). Sodium carbonate adjusts the pH and minimizes the corrosion of lead and copper that may be present in household plumbing. Once water is fully treated, it is conveyed to Salem and delivered throughout the City's water distribution system to your tap.

When river water quality deteriorates, the City can activate additional treatment barriers. One treatment process may include the addition of powdered activated carbon (PAC), which causes potential raw water contaminants, such as cyanotoxins, to adsorb to the powdered carbon and settle out of the water column. Acetic acid can be added to the raw water to act as a food source to boost the effectiveness of the filters biological layer to consume contaminants. Ozonation can be increased, which removes any cyanotoxin that has made its way past filtration. Lastly, chlorine dosage can be increased as a way to ensure disinfection within the distribution system. The City has also recently finished a Ranney Collector Well system on Geren Island that provides access to groundwater when surface water quality may be impaired.

The City also operates an Aquifer Storage and Recovery (ASR) well system, located underground in South Salem, to store and recover treated water. During the winter months, when river flows are high and the water demand is low, treated drinking water is injected into the naturally formed aquifer located 350 feet below Woodmansee Park. During the summer months, when river flow is typically at its lowest and water demand is high, water in the aquifer is pumped back to the surface, sampled for quality, and sent back into the distribution system to be used by customers. The ASR facility treats the recovered water with sodium hypochlorite (chlorine) for disinfection and adds sodium hydroxide for pH adjustment before it is put into the distribution system.

Please visit the City's Water webpage, under www.cityofsalem.net/utilities for more details about Salem's treatment process.

Where Does Salem's Water Come From?

Salem's source water starts with a raindrop or snowflake that falls on the west side of the Cascade Range, near Mt. Jefferson and Three Fingered Jack. As that water moves downhill, it flows over land, through soil and rock to the mainstem of the North Santiam River. It is stored temporarily in Detroit and Big Cliff Reservoirs until it is released through the dam gates and flows downstream towards the canyon communities. A small portion of the river is diverted, treated and distributed to Salem water customers. For more information about the North Santiam Watershed, visit the City's website to take a virtual watershed tour.

The total miles of water mains, from point of entry to the Salem water system to resident's faucet, is just under 700 miles!

Salem's Water System serves a population of over 217,937 daily from the North Santiam River.

2023 Water Quality Data from Geren Island Treatment Facility, Distribution System, and Salem Water Customers									
Test	Date Tested	Unit	MCLG (MRDLG)	MCL (MRDL)	Detected Level	Range		Violation	Major Sources
						Lowest	Highest		
Inorganic									
Fluoride	2023	ppm	4	4	Average: 0.60	<0.20	0.70	NO	Erosion of natural deposits; water additive–promotes strong teeth
Copper[1]	2022	ppm	1.3	AL = 1.3	Entry Point Sample:	One Sample Collected		NO	Corrosion of household plumbing systems
Nitrate	2023	ppm	10	10	0.022	<0.050	0.22	NO	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Nitrate-Nitrite	2023	ppm	10	10	0.22	<0.050	0.22	NO	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Barium[1]	2021	ppm	2	2	0.22	One Sample Collected		NO	Discharge of drilling wastes; discharge from metal refineries;
Copper	June – Sept. 2023	ppm	1.3	AL=1.3	90th Percentile: 0.237 Homes exceeding: 0	<0.030	0.365	NO	Corrosion of household plumbing systems
Lead	June – Sept. 2023	ppb	0	AL =15	90th Percentile: 6.8 Homes exceeding: 4	<0.0010	36.9	NO	Corrosion of household plumbing systems
Microbiological									
Turbidity	2023	NTU	n/a	TT	100% of samples meet turbidity standards	0.04	0.16	NO	Erosion and soil runoff
Total coliform	2023	no units	n/a	TT	1,446 samples collected	None	2 positive of 120 samples or 1.7%	NO	Naturally present in the environment
E. coli bacteria	2023	no units	0	Routine and repeat samples are total coliform-positive and either E. coli-positive or the water supplier fails to collect repeat samples following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli	E. coli bacteria were not detected	None	None	NO	Human and animal fecal waste
Disinfection By-products, By-product Precursors, and Disinfectant Residual									
Haloacetic acids	2023	ppb	0	60	Locational Running Annual Average:16	11	24	NO	By-product of drinking water disinfection
Total Trihalomethanes	2023	ppb	0	80	Locational Running Annual Average: 18.5	10	29	NO	By-product of drinking water disinfection
Total Trihalomethanes	2023	ppb	0	80	Entry Point Average: 6.7	<0.5	10	NO	By-product of drinking water disinfection
Haloacetic acids	2023	ppb	0	60	Entry Point Average: 9.5	<2.0	15	NO	By-product of drinking water disinfection
Total Organic Carbon	2023	ppm	n/a	TT	Raw Water Annual Average: 0.75	0.51	0.94	NO	Naturally present in the environment
Chlorine Residual	2023	ppm	4	4	Entry Point Average: 1.25	0.66	1.80	NO	Remaining chlorine from disinfection process
Bromate	2023	ppb	0	10	8 Samples Collected	<1.0	<1.0	NO	By-product of drinking water disinfection
Radioactive Constituents									
Gross Beta Particle Activity	2023	pCi/L	40	50	1.14	One Sample Collected		NO	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Unregulated Constituents									
Sodium	2023	ppm		20[2]	8.0	7.2	8.8	NO	Erosion of natural deposits

2023 Water Quality Data from Aquifer Storage and Recovery Wells									
Inorganic									
Barium[1]	2023	ppm	2	2	0.0022	One sample collected		NO	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Fluoride	2023	ppm	4	4	0.50	0.45	0.55	NO	Erosion of natural deposits; water additive–promotes strong teeth
Nitrate	2023	ppm	10	10	0.092	One sample collected		NO	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Nitrate-Nitrite[1]	2022	ppm	10	10	0.092	One sample collected		NO	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Chromium[1]	2022	ppb	100	100	1.2	One sample collected		NO	Discharge from steel and pulp mills; erosion of natural deposits
Disinfection By-Products, Byproduct Precursors, and Disinfectant Residual									
Haloacetic acids[1]	2022	ppb	0	60	40.0	One sample collected		NO	By-product of drinking water disinfection
Total Trihalomethanes[1]	2023	ppb	0	80	Entry Point Average: 5.2	2.8 sample collected	7.1	NO	By-product of drinking water disinfection
Total Organic Carbon[1]	2023	ppm	n/a	TT	0.33	<0.20	0.37	NO	Naturally present in the environment
Organic Constituents									
Hexachlorocyclopentadiene[1]	2020	ppb	0	50	0.056	One sample collected		NO	Discharge from chemical factories
Radioactive Constituents									
Gross Beta Particle Activity	2023	pCi/L	40	50	1.19	One Sample Collected		NO	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Unregulated Constituents									
Sodium	2023	ppm		20[2]	11.3	8.5	15.0	NO	Erosion of natural deposits

[1]The City of Salem is required to report any detected contaminant within the last five years. [3]EPA advisory level only.

UNITS OF MEASUREMENT

Parts per Million (ppm)
One part per million is equal to one cup of food coloring in an Olympic size swimming pool.

Parts per Billion (ppb)
One part per billion is equal to one drop of food coloring in an Olympic size swimming pool.

Nephelometric Turbidity Unit (NTU)
The standard unit of measurement used in water analysis to measure turbidity in water samples.

Picocuries per Liter (pCi/L)
One part per billion of a curie per liter of water, used to measure radiation at very low levels.

DEFINITIONS

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.

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

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

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

Maximum Residual Disinfectant Level (MRDL)
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Unregulated Contaminant Monitoring Rule Results

Round 5 (UCMR5) Detected Contaminant Results

The Unregulated Contaminant Monitoring Rule (UCMR) requires water providers nationwide to sample for unregulated contaminants once every five years. The EPA uses these sampling efforts to collect information about contaminants suspected to be present in drinking water, but which are currently not regulated by health based limits under the Federal Safe Drinking Water Act. The UCMR5 – fifth round of UMCR, requires monitoring for 29 per-and polyfluoroalkyl substances (PFAS) and lithium. More information about the UCMR is available from the Safe Drinking Water Hotline at 1-800-426-4791.

The City of Salem collected Unregulated Contaminant Monitoring Rule – Round 5 (UCMR5) samples at Aldersgate, the entry point to the Salem water distribution system during 2023. UCMR5 samples collected from the Aquifer Storage and Recovery Wells occurred in November 2023.

Analyte	Acronym	Minimum Report Level (ppb)	Aldersgate (entry point to the disribution system)				Aquifer Storage and Recovery Well System
			Jan - 23 (ppb)	April - 23 (ppb)	Jul - 23 (ppb)	Oct - 23 (ppb)	Nov - 23 (ppb)
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexafluoropropylene Oxide Dimer Acid	HFPO-DA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Perfluorobutanesulfonic acid	PFBS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluorodecanoic acid	PFDA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluorododecanoic acid	PFDoA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluoroheptanoic acid	PFHpA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluorohexanesulfonic acid	PFHxS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluorohexanoic acid	PFHxA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluorononanoic acid	PFNA	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Perfluorooctanesulfonic acid	PFOS	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Perfluorooctanic acid	PFOA	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Perfluoroundecanoic acid	PFUnA	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutanoic acid	PFBA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1H,1H,2H,2H-Perfluorodecanesulfonic acid	8:2 FTS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1H,1H,2H,2H-Perfluorohexanesulfonic acid	4:2 FTS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
1H,1H,2H,2H-Perfluorooctane sulfonic acid	6:2 FTS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	<0.020	<0.020	<0.020	<0.020	<0.0200	<0.0200
Perfluoro (2-ethoxyethane) sulfonic acid	PFEESA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluoro-3-methoxypropanoic acid	PFMPA	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Perfluoro-4-methoxybutanoic acid	PFMBA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluoropentanoic acid	PFPeA	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluoroheptanesulfonic acid	PFHpS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Perfluoropentanesulfonic acid	PFPeS	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
N-ethylperfluorooctanesulfonamidoacetic acid	NEtFOSAA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
N-methylperfluorooctanesulfonamidoacetic acid	NMeFOSAA	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Perfluorotetradecanoic acid	PFTA	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080
Perfluorotridecanoic acid	PFTrDA	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070
Lithium	Li	<9.00	<9.00	<9.00	<9.00	<9.00	<9.00

[1]MRL is the UCMR Minimum Reporting Level. A result is recorded as less than or "<" the MRL when analyte is not detected or detected at a concentration less than the MRL.

No PFAS Detections in Salem's Drinking Water or Source Water

What are PFAS?

PFAS are widely used and long-lasting substances often referred to as "forever chemicals". PFAS are a group of manufactured chemicals that can be found in many common household items such as cleaning products, non-stick cookware, food wrappers, waterproof clothing, make-up products, firefighting foam, and more. By identifying these products in your home, you can work on reducing your exposure to them. Ongoing scientific research suggests that exposure to different PFAS can lead to a variety of adverse health effects. Salem is taking early steps to share testing data and the potential risks of PFAS with the community so you can be better informed.

For more information from the EPA about PFAS visit: www.epa.gov/pfas.

Drinking Water and Source Water Testing Show No Detections of PFAS

While the science behind this emerging global issue continues to be studied, there are no detections of PFAS at or above the EPA minimum reporting levels in the City of Salem's drinking water. This data is from the UCMR5 test results.

The City also wanted to know about Salem's drinking water source. Salem did additional testing at the North Santiam River for 29 PFAS compounds in January 2024. PFAS were not detected in the North Santiam River at or above the laboratory's minimum reporting levels.

The City is committed to keeping residents informed as the science develops on this issue. The City will continue to work with federal and state regulators and other stakeholders to understand and mitigate the potential impacts PFAS might have on Salem's water infrastructure systems.

More information and test results can be viewed on the City of Salem website at: www.cityofsalem.net/community/natural-environment-climate/reports-references-and-resources/understanding-pfas

Analyte	Acronym	Minimum Report Level (ppb)	North Santiam River Jan - 24
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	0.002	<0.0020
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	0.002	<0.0020
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	0.002	<0.0020
Hexafluoropropylene Oxide Dimer Acid	HFPO-DA	0.002	<0.0020
Perfluorobutanesulfonic acid	PFBS	0.002	<0.0020
Perfluorodecanoic acid	PFDA	0.002	<0.0020
Perfluorododecanoic acid	PFDoA	0.002	<0.0020
Perfluoroheptanoic acid	PFHpA	0.002	<0.0020
Perfluorohexanesulfonic acid	PFHxS	0.002	<0.0020
Perfluorohexanoic acid	PFHxA	0.002	<0.0020
Perfluorononanoic acid	PFNA	0.002	<0.0020
Perfluorooctanesulfonic acid	PFOS	0.002	<0.0020
Perfluorooctanic acid	PFOA	0.002	<0.0020
Perfluoroundecanoic acid	PFUnA	0.002	<0.0020
Perfluorobutanoic acid	PFBA	0.002	<0.0020
1H,1H,2H,2H-Perfluorodecanesulfonic acid	8:2 FTS	0.002	<0.0020
1H,1H,2H,2H-Perfluorohexanesulfonic acid	4:2 FTS	0.002	<0.0020
1H,1H,2H,2H-Perfluorooctane sulfonic acid	6:2 FTS	0.002	<0.0020
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	0.002	<0.0020
Perfluoro (2-ethoxyethane) sulfonic acid	PFEESA	0.002	<0.0020
Perfluoro-3-methoxypropanoic acid	PFMPA	0.002	<0.0020
Perfluoro-4-methoxybutanoic acid	PFMBA	0.002	<0.0020
Perfluoropentanoic acid	PFPeA	0.002	<0.0020
Perfluoroheptanesulfonic acid	PFHpS	0.002	<0.0020
Perfluoropentanesulfonic acid	PFPeS	0.002	<0.0020
N-ethylperfluorooctanesulfonamidoacetic acid	NEtFOSAA	0.002	<0.0020
N-methylperfluorooctanesulfonamidoacetic acid	NMeFOSAA	0.002	<0.0020
Perfluorotetradecanoic acid	PFTA	0.002	<0.0020
Perfluorotridecanoic acid	PFTrDA	0.002	<0.0020

2023 Lead and Copper Sampling Results

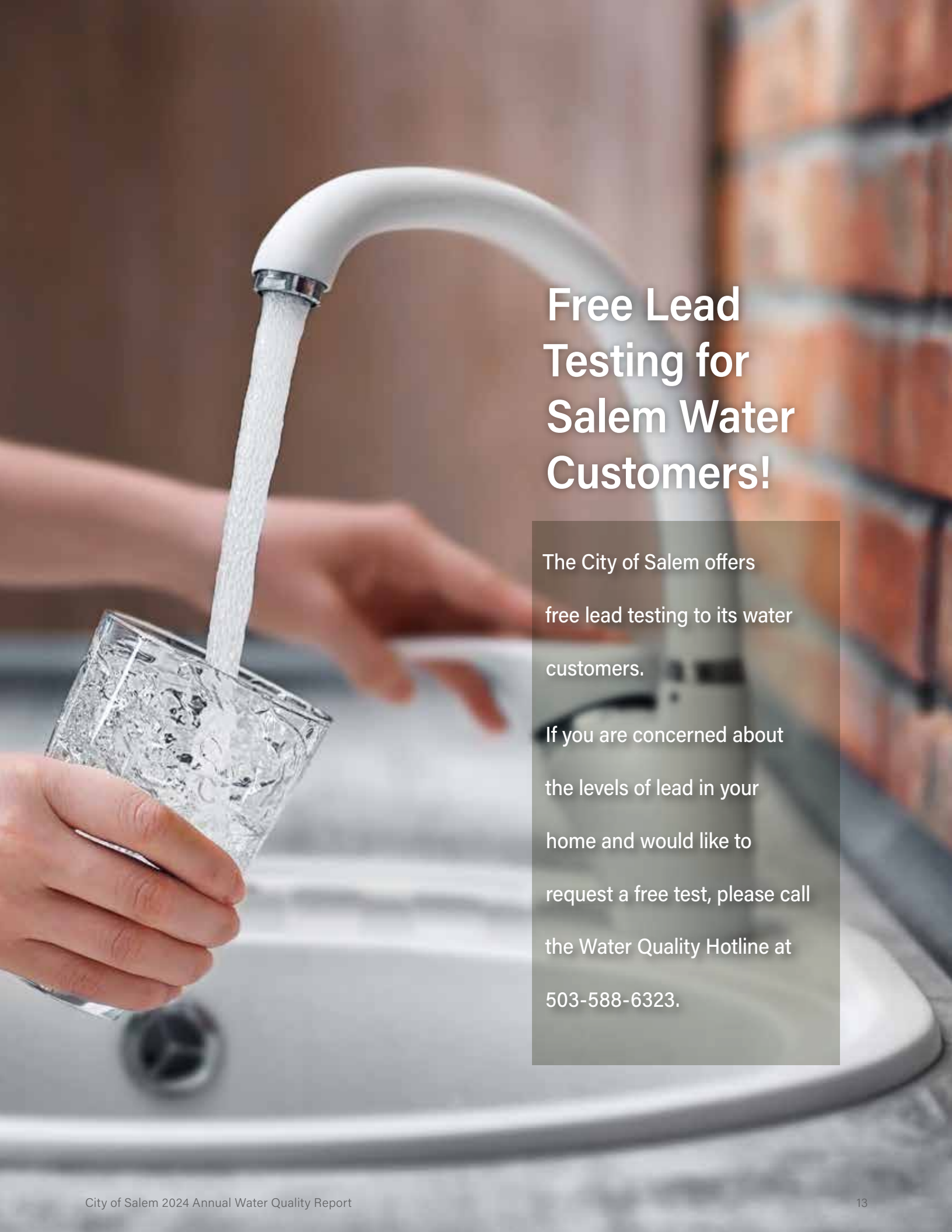
The Oregon Health Authority granted the City a reduction in lead and copper monitoring based on the 2022 results. The City's current lead and copper monitoring requires samples from a minimum of 50 Tier 1 sites on an annual cycle from June 1 – September 30. Assessments made in the 1990s identified 147 Tier 1 homes in Salem that met the qualifications for ongoing lead and copper sampling. Tier 1 homes are identified as those built between 1983 and 1985, and are considered to be most at risk because of lead or lead-based plumbing components commonly used during construction during those years.

In 2023, samples were collected from Tier 1 homes from June 1, 2023 through September 30, 2023. The City had to analyze a minimum of 50 samples for lead and copper. Thanks to cooperative residents, the City was able to analyze 88 samples from Tier 1 homes. Four homes had lead levels that exceeded the lead action level. None of the homes exceeded the copper action level.

Lead and Copper data from 2023 is detailed in the water quality data table. The next round of sampling will occur in the second half of 2024.

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 in services lines and home plumbing. The City of Salem 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 your exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at www.epa.gov/safewater/lead



Free Lead Testing for Salem Water Customers!

The City of Salem offers free lead testing to its water customers.

If you are concerned about the levels of lead in your home and would like to request a free test, please call the Water Quality Hotline at 503-588-6323.

Service Line Inventory

Lead and Copper Rule Revisions Include Drinking Water Service Line Inventory

In 2023, the City began completing Salem's Service Line Inventory. This inventory is regulated by the federal Lead and Copper Rule Revisions (LCRR). The U.S. Environmental Protection Agency (EPA) revised its Lead and Copper Rule to reduce the exposure of lead through drinking water nationwide. Building the service line inventory will be an ongoing process. The City is also getting ahead on upcoming federal regulations called the Lead and Copper Rule Improvements (LCRI).

A service line is the pipe that runs from the City's drinking water main to a home's internal plumbing. A service line is divided into two distinct sections, divided at the water meter.

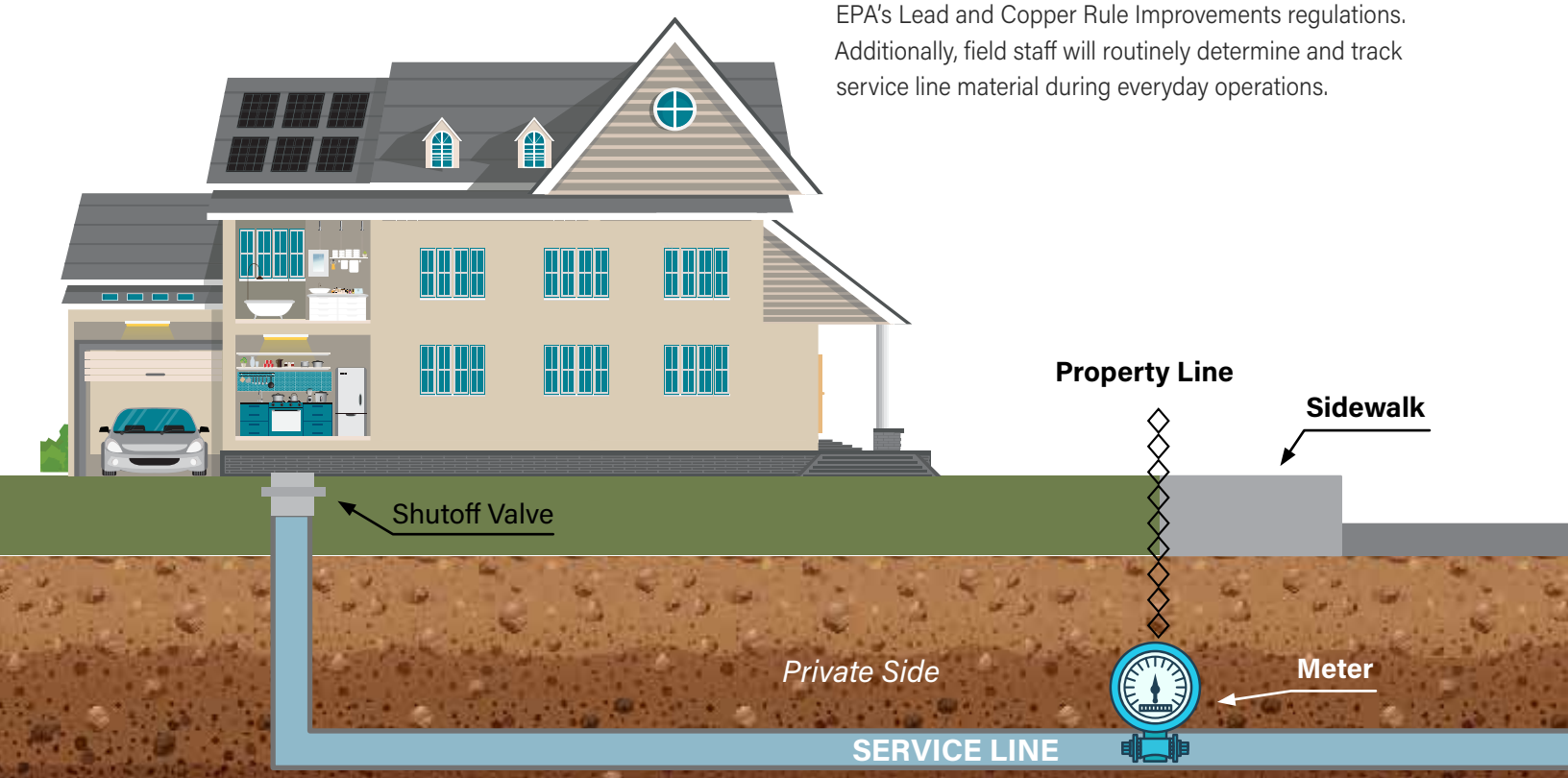
One section is the City-owned (public) service line that leads from the underground water main to the meter box. The other section is the customer (private) line that goes from the meter box up into the private building and are the property owner's responsibility. The City has a complete inventory of the city-owned (public) service lines. There are no known publicly owned lead service lines in Salem. The other half of the project was to discover the material type of privately owned lines.

Determining Pipe Material of Private Service Lines

The City worked with consultants to determine an OHA and EPA approved site selection and identification method. The number of sites for investigation are determined by water system size. As required, 383 sites were to be investigated for this phase of the inventory. These sites were selected randomly but were evenly located across Salem. Only homes built before the lead ban in 1986 are included in the homes considered for investigation.

Once permission was granted from water customers to inspect their service lines, the City used a specialty potholing contractor, VacX. At each site VacX dug out a shovel size section of grass, then used a tube to suction dirt and rocks away until the service line was exposed, about 6-12 inches below ground. A Water Distribution Project Leader then identified the material type of the service line and uploaded the data into Salem's geographic information system (GIS). VacX then filled the small hole with dirt and grass to restore the area.

City of Salem appreciates the cooperation of the residents who were selected to be in this phase of the project. New sites will be inspected in the coming years as part of the EPA's Lead and Copper Rule Improvements regulations. Additionally, field staff will routinely determine and track service line material during everyday operations.



So far there are no private service lines made of lead in Salem. Stay tuned for the results map of Salem's Service Line Inventory. The approximate testing locations and their service line material will be available on a public online map on the City of Salem website no later than October 2024.

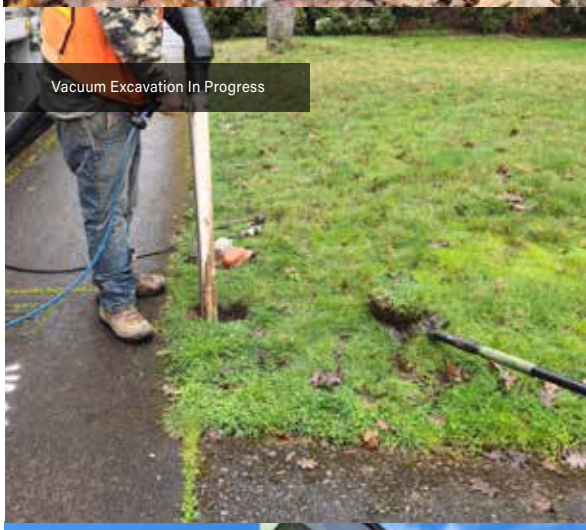
More information about the Service Line Inventory Project can be found at: www.cityofsalem.net/community/household/water-utilities/drinking-water-treatment/drinking-water-service-line-inventory

How do I find out the material type of my service line or indoor plumbing?

The City is responsible for materials in the distribution system up to the customer meter. With upcoming regulations, more service lines may be chosen to be inspected by the City. In the meantime, you can hire a certified plumber to inspect your service line, indoor plumbing, and other fixtures that come into contact with your drinking water, at your own expense. Also, be sure to only purchase certified lead-free plumbing fixtures and faucets for use in your home.

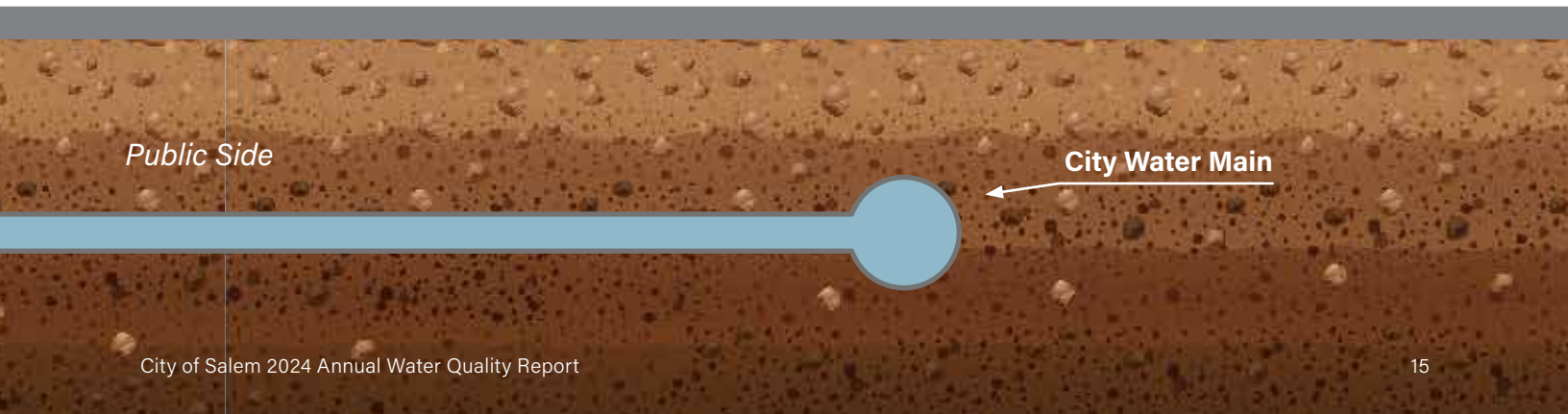
For water customers, the City of Salem also offers a free lead test for a water sample from your faucet. While this doesn't test the service line material, you can still find out if lead is a concern in your home plumbing. Request a free do-it-yourself test of your water through the City's Free Lead Testing Program. Call the Water Quality Hotline at 503-588-6323 or email water@cityofsalem.net for more information.

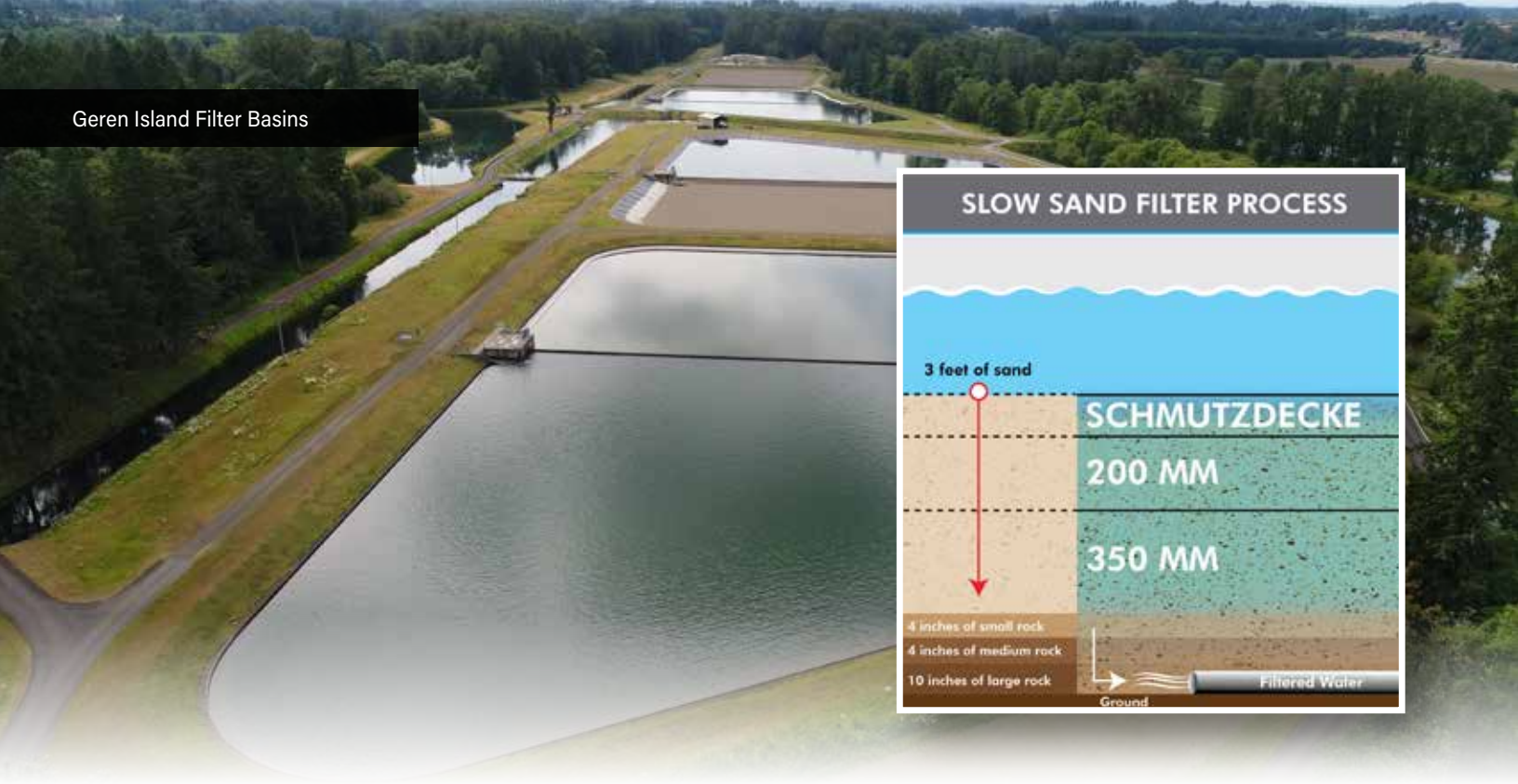

Service Line Visible During Excavation


Vacuum Excavation In Progress

Vacuum Excavator Truck

The City of Salem has a total of 56,000 drinking water service lines.





Geren Island Filter Basins

Salem's Treatment Process

Geren Island, Salem's drinking water treatment facility, is perfectly situated on the North Santiam River for water to be easily diverted from the main channel without the use of extra pumps. Water from the North Santiam River flows through an intake grate that blocks larger debris, such as logs, from entering the settling channel that flows parallel to the filters. Once diverted from the river, this untreated raw water flows from the South Channel into separate roughing filters. Salem uses a biological and physical filtration called Slow Sand Filtration (SSF). SSF is a low-tech filtration process that has been used for nearly 200 years and is proven to be efficient, consistent in quality, and have lower costs when compared to membrane filters that may need chemical pre-treatments. A SSF is also known as a Biological Sand Filter. This biological filter process uses a Schmutzdecke, a biological layer that lives along the top layer of the sand that consumes and removes harmful bacteria, microbes, and pathogens. These filters also remove suspended particles, dissolved organic materials, and can handle extended periods of higher turbidity as water is filtered through three feet of sand. Among the more important properties of SSFs is their ability to remove cyanobacteria and cyanotoxins.

Once through the roughing filters, water is then treated with ozone. Any cyanotoxins left in the filtered water will be destroyed by ozone treatment. Ozone is created on-site by pushing oxygen (O_2) through a microgap between two high voltage electrodes while being injected into water. During this process, oxygen molecules are converted into oxygen radicals (O), which then react with O_2 to create ozone (O_3). Ozone is a powerful oxidizer and reacts with contaminants and impurities in water to break them down and eliminate them from the drinking water.

At the end of the ozone process, hydrogen peroxide is added to the water to neutralize ozone. Hydrogen peroxide, H_2O_2, combines with ozone, O_3, to make water and oxygen, H_2O and O_2, leaving no detectable traces of ozone. Post ozonation, water is filtered a second time through a finishing filter. Then the water completes the treatment process by being chlorinated, fluoridated, and treated with soda ash to adjust pH before being conveyed to Salem for distribution. Since adding ozonation to the drinking water treatment process in 2022, the City of Salem has been able to use less chlorine in the treatment process, reducing cost and chemical inputs.

The City of Salem operates a very resilient and robust water system. The City continues to utilize its source water efficiently and has established redundant systems through the new Ranney Collector Well and ongoing work with the ASR system. With all of these water resources in place, the City can reliably serve your water needs.

System Improvements for a Growing Salem

Improvements to Filter 2

The City of Salem recently rebuilt and improved upon a Slow Sand Filter used for drinking water treatment. Filter 2 serves as one of Geren Island's oldest filters, used for treating Salem's drinking water for more than eighty years. Filter improvements were needed as the underground pipes used to collect filtered water had slowly become impacted by fine sand particles from decades of use. This resulted in low flow and minimized filtering capacity, reducing the total efficiency of Salem's treatment process.

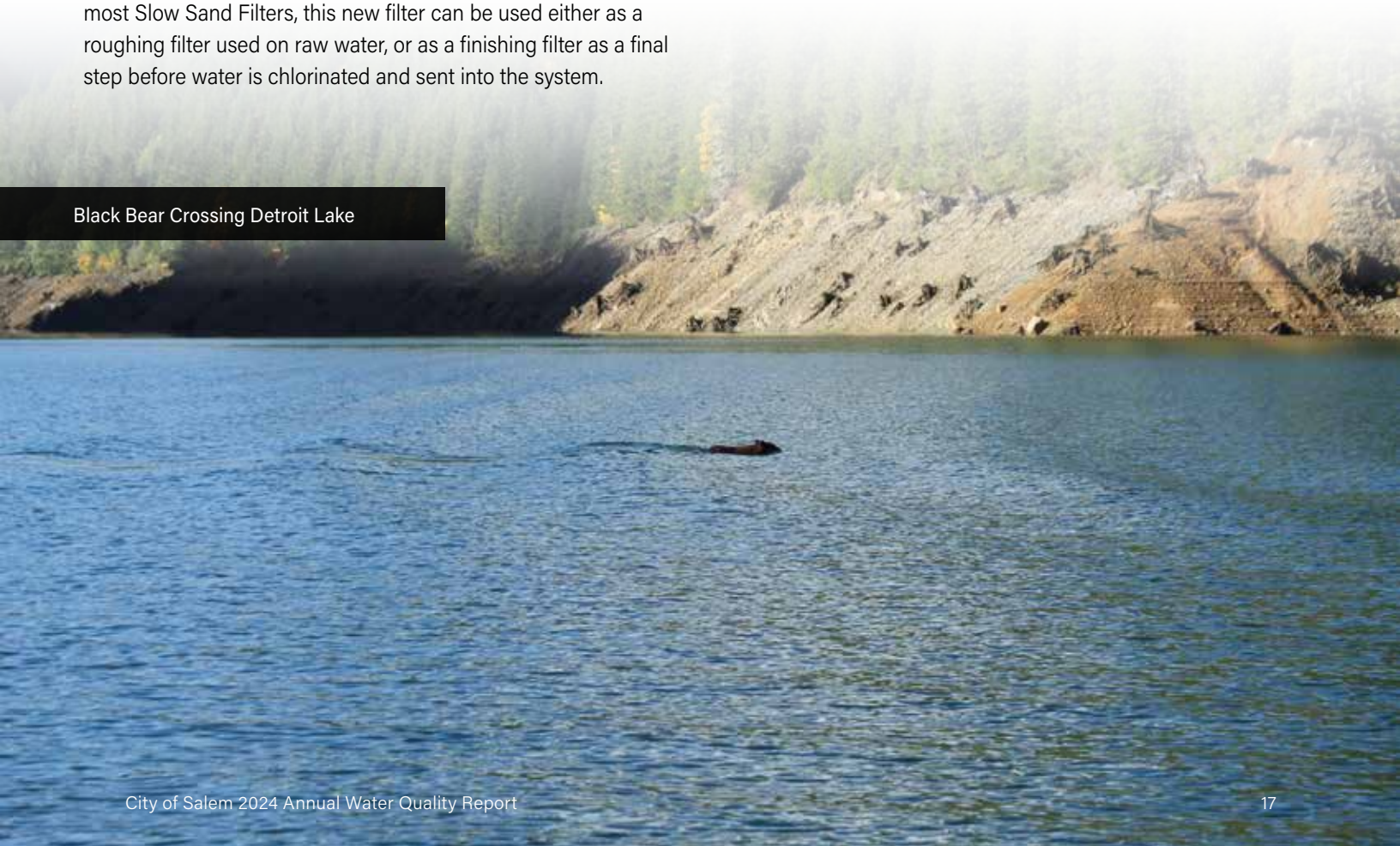
In 2021, a contractor was selected to reconstruct the impacted filter. To deconstruct the filter, the contractor had to first excavate the compacted sand, remove the aging underground pipe work, and expand and reshape the original filter area. To rebuild the filter, a new liner and underdrainage was placed at the base of the excavated area with the slotted underdrainage pipes extending from one larger main pipe to maximize capture zones. Sand was added on top of the drainage area and compacted until three feet of compacted sand covered the drainage. New control and overflow structures were also built.

Nearly 2 years of construction concluded in the fall of 2023, several months ahead of schedule. The new and improved Slow Sand Filter has a surface area of 4.6 acres of filtering capacity and can produce 37 MGD (Million Gallons per Day) of filtered water. Like most Slow Sand Filters, this new filter can be used either as a roughing filter used on raw water, or as a finishing filter as a final step before water is chlorinated and sent into the system.

Using a Ranney Well as a Secondary Source

The City of Salem is fortunate to have clean and abundant source water from the North Santiam River. Even with a reliable source water, the City is prepared with varied water reserves. The ASR facility in South Salem can be used during peak demand in summer months and as an emergency supplement of water for Salem. Additionally, a new way to access water at Geren Island has been constructed, a Ranney Collector Well.

A Ranney Well provides access to ground water that is under the influence of surface water trapped in aquifers and openings in underground rock cavities. What sets a Ranney Well apart from other wells are lateral slotted drainpipes that project out from the main vertical well shaft. Ranney Wells allow utilities to construct fewer wells in a given area to access a larger field area, saving resources and money. With horizontal drainage pipes, water can be accessed in pockets of water farther away from the main well that may otherwise be inaccessible. The Ranney Well at Geren Island is 30-feet deep and can produce four MGD of water to the treatment facility. The well provides the City with better access to water at the treatment facility and will serve as a backup source during contamination events in the North Santiam River, such as a chemical spill, cyanotoxin bloom, or excessive turbidity events.



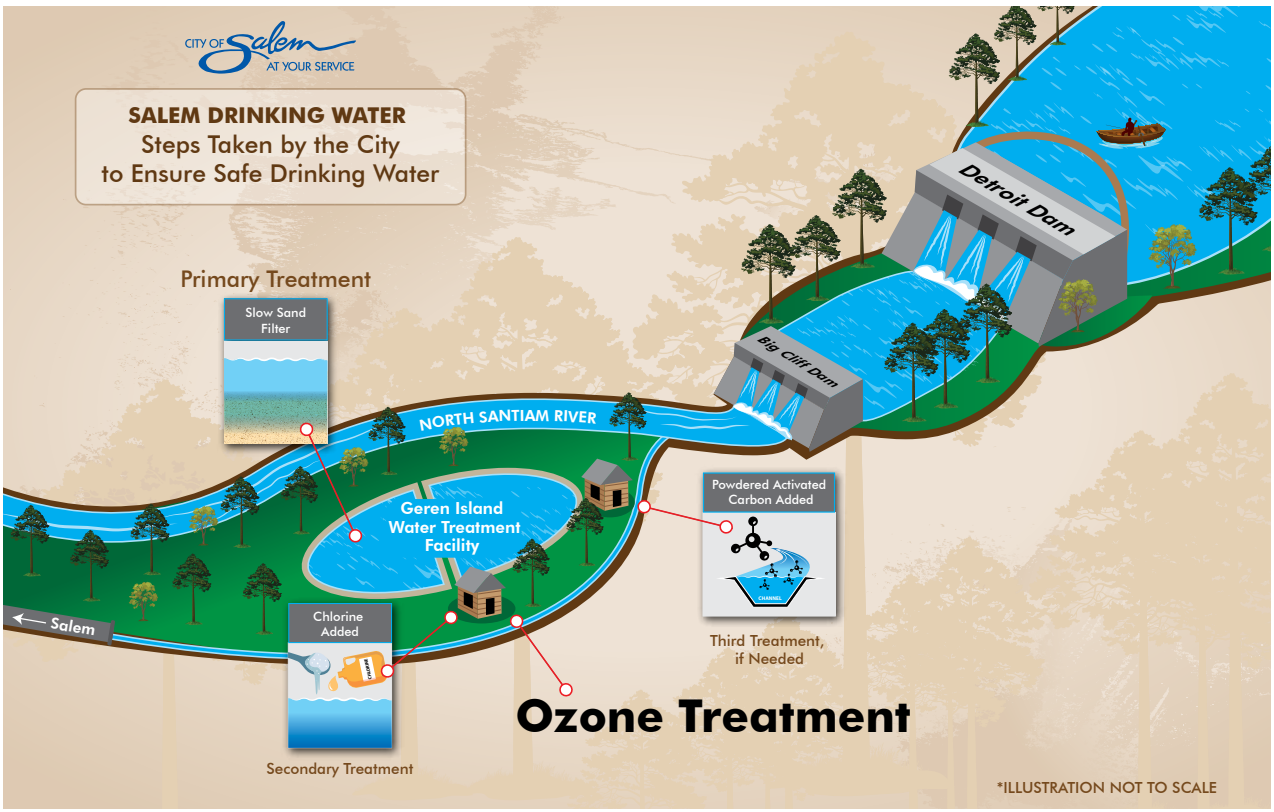
Black Bear Crossing Detroit Lake

How Does Ozone Treatment Work?

Water from the North Santiam River flows through a roughing filter, which is used as an initial pre-filter process. The roughing filter removes cyanobacteria, which is a primary organism that is known to produce cyanotoxins, and other debris from the raw river water. Any cyanotoxins in the raw water will be destroyed by ozone treatment. The water is injected with ozone, which is created on-site by passing oxygen (O_2) through a microgap between two high voltage electrodes. Oxygen molecules are converted into oxygen radicals (O). Oxygen radicals react with O_2 to produce O_3. Ozone is highly unstable and reacts with impurities in the water.

When the ozone treatment process is done, one hundred percent of the injected ozone is removed from the water. This water is then filtered a second time through slow sand filters which are comprised of a schmutzdecke (biological layer), gravel and sand to further remove contaminants. The water is then finally chlorinated, fluoridated, and treated with soda ash before conveyed to Salem for distribution. With ozone added to the drinking water treatment process, less chlorine can be used.

The City of Salem is also investing in a new additional groundwater system at the Geren Island Water Treatment Plant. Construction of a ranney groundwater collector well continues. This groundwater well will provide a second source of water at the water treatment facility that is protected from cyanobacteria, storm events and post-wildfires effects that impact the North Santiam River water quality.

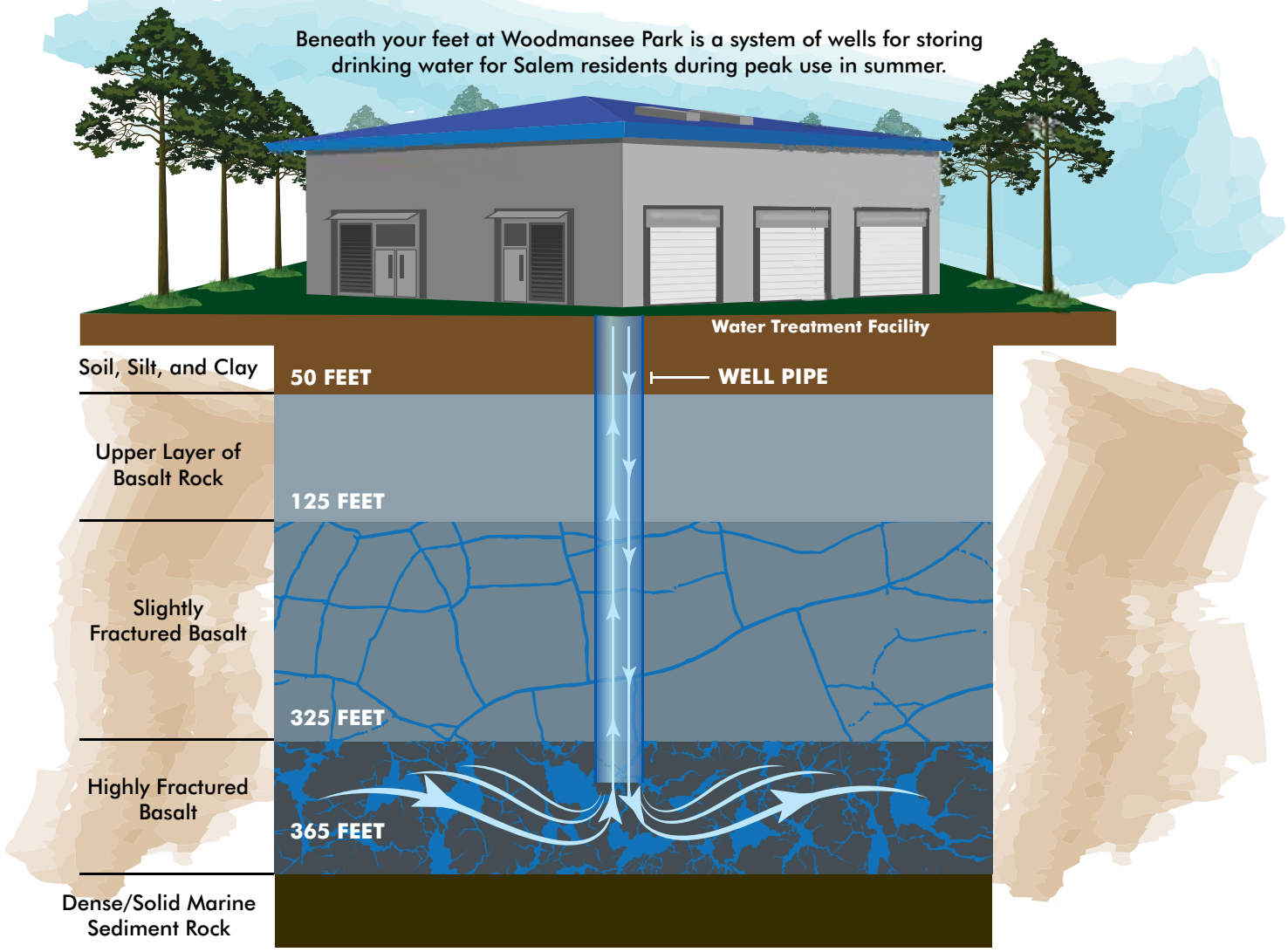


Benefits of Ozone

- Destroys cyanotoxins
- Makes it easier to ensure safe drinking water
- Works well with the other treatment steps on Geren Island
- Produces good tasting water, year-round
- Reduces how much chlorine is needed
- No ozone is left in the water after it has done its job

Aquifer Storage and Recovery System at Woodmansee Park

Beneath your feet at Woodmansee Park is a system of wells for storing drinking water for Salem residents during peak use in summer.



Did You Know?

- Treated North Santiam River water is injected into the aquifer during high flows in winter and stored below in an aquifer made from an ancient lava flow.
- Geologists have identified the basalt rock as being part of the Columbia River lava that flowed through South Salem 17 million years ago.
- The aquifer is like a large cavern filled with fractured basalt rock. Water is stored in the rocks, and can store over 700 million gallons of water.

Cyanotoxin Testing

Algae blooms are regularly observed in Detroit Reservoir from April or May through September or October. Algal blooms are a natural process. Blooms occur when there is significant algae growth in a short period of time due to optimal environmental conditions – such as light, warm water and nutrients. When stressed, some algal blooms can produce cyanotoxins as a defense mechanism. The City maintains a robust watershed monitoring program that monitors harmful algal blooms and cyanotoxins.

Oregon Health Authority drinking water regulations require testing of two cyanotoxins – Total Microcystins and Cylindrospermopsin annually from May 1 – October 31.

If the levels reach the Oregon Health Authority Health Advisory notification threshold, the City will issue an advisory and provide water quality updates on the website.

Cyanotoxin Test Results*												
Site Location	**Test**	**Test Date**	**Unit**	**Health Advisory Level for Vulnerable Population**	**Health Advisory Level for All Population**	**Oregon DEQ Lab: Lowest Results**	**Oregon DEQ Lab: Highest Results**	**Willow Lake Lab[1] Lowest Result**	**Willow Lake Lab[1] Highest Result**	**Advisory Issued?**	**Advisory Type**	**Advisory Dates**
Raw Water - North Santiam River: Middle Intake	Microcystin	May - October 2023	ppb	0.3	1.6	ND	ND	ND	ND	NO	None	None
	Cylindrospermopsin			0.7	3	ND	ND	ND	ND			
Finished Water - Entry Point: Aldersgate	Microcystin	May - October 2023	ppb	0.3	1.6	ND	ND	ND	ND	NO	None	None
	Cylindrospermopsin			0.7	3	ND	ND	ND	ND			

Notes: *The source of cyanotoxins are from a harmful algal bloom of cyanobacteria.

[1] Willow Lake Laboratory is an ORELAP accredited laboratory located at the City fof Salem's Wastewater Treatment Facility. Willow Lake Laboratory can analyze samples quickly, often within 24 hours of receiving the sample.

DEFINITIONS

Harmful Algae Bloom means a dense colony of cyanobacteria that can rapidly multiply in surface waters when environmental conditions are favorable for growth.

Cyanobacteria are photosynthetic bacteria that share some properties with algae and are found naturally in freshwater and saltwater. Some species of cyanobacteria can produce toxins, which are known to be harmful to human health above certain concentrations.

Cyanotoxins means total microcystins and cylindrospermopsin produced by cyanobacteria.

ND refers to a non-detection meaning that the analytical result is less than the reporting limit for the analytical method being used to quantify the concentration.

Consuming water containing concentrations of cyanotoxins over the health advisory level for more than ten days may result in upset stomach, diarrhea, vomiting, as well as liver or kidney damage. Seek medical attention if you or your family members experience illness.

All daily water quality results of data collected during the year of 2023 specific to cyanotoxins are available on the City of Salem's website. For more detailed information on the monitoring program and the data results of cyanotoxins, please visit the City of Salem website under: www.cityofsalem.net/community/household/water-utilities/drinking-water-treatment/water-quality-testing-cyanotoxin.

Accessing Water Quality Information in Real Time

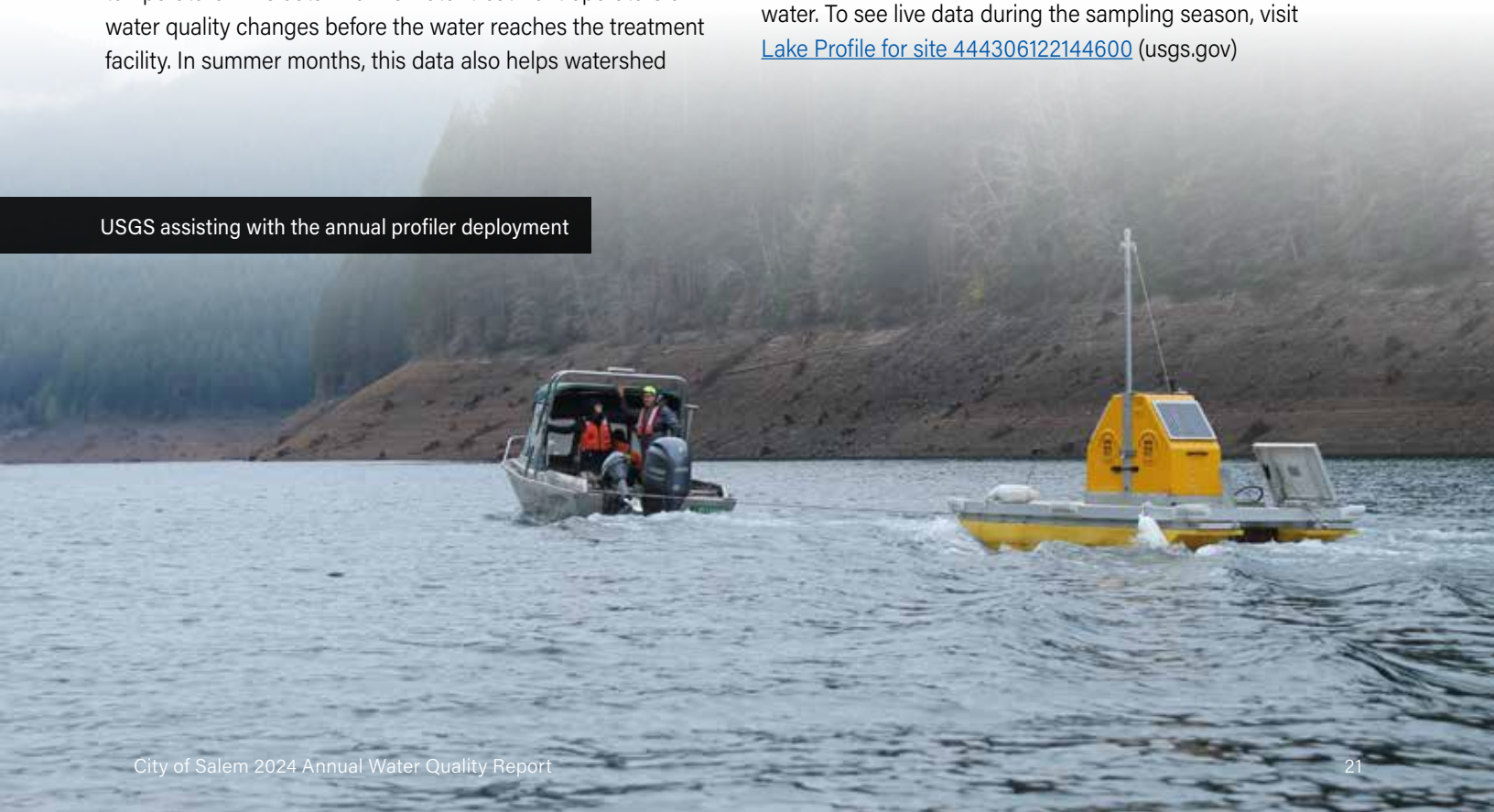
How We Monitor Our Source Water From Afar

Have you ever visited Detroit Reservoir and noticed a yellow pontoon attached to the log boom near the dam? That's an important water quality monitoring tool called a profiler (or pontoon vertical profiler system)!

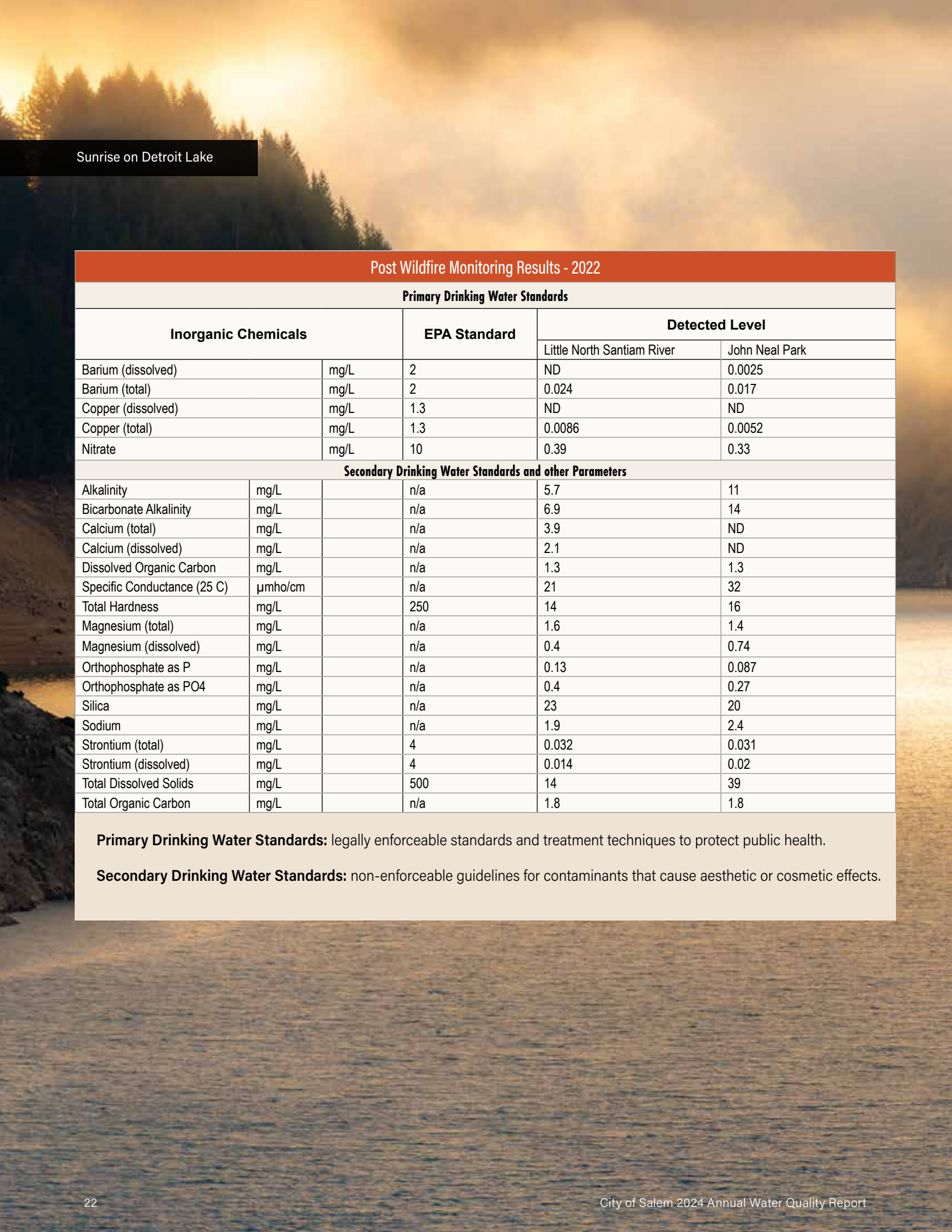
The City partners with various groups, organizations and agencies who are actively involved in rebuilding the North Santiam Canyon. The City has worked with the U. S. Geological Survey (USGS) on several water quality monitoring projects throughout the years. This partnership has allowed for continuous data sharing, resource implementation, ongoing monitoring, and access to system improvements being done across the country. USGS supports the City through a Joint Funding Agreement (JFA) to monitor the source water by managing several permanent water quality monitoring stations along the North Santiam and Little North Santiam River. Three of these monitoring stations utilize an instrument that collects water quality data and can deliver this information in near real time. Measurements are taken with sensors in the instrument that analyze temperature, conductivity, turbidity, total chlorophyll (indicator of algae), phycocyanin (indicator of cyanobacteria), dissolved oxygen, pH, and fluorescent dissolved organic matter. Other stations track river flow, depth, and temperature. This data informs water treatment operators on water quality changes before the water reaches the treatment facility. In summer months, this data also helps watershed staff watch for indications of algae growth to better manage sampling frequency. This data is available to the public and has been used to support research outside of drinking water, such as post-fire recovery and river temperature effect on salmonid species. River monitoring stations can be found at North Santiam River at Mehama, OR - USGS Water Data for the Nation.

While the City owns the profiler, USGS maintains and supports the operation of the profiler instrumentation. This floating system uses the same instrument that collects water quality data as the other monitoring stations. It is programmed to lower the instrument nearly 200 feet under water at set times during the day to show how water quality is changing.

The profiler instrumentation is incredibly useful in tracking seasonal and environmental changes on Detroit Reservoir. Algal growth is a natural occurrence that happens under optimal environmental conditions, such as increased temperatures in the summer, and is not always an indication of poor water quality. The instrument's sensor for phycocyanin, a pigment in the chlorophyll of cyanobacteria, can show at what depth cyanobacteria growth may be increasing. This data helps watershed staff with monitoring efforts of the City's drinking water. To see live data during the sampling season, visit Lake Profile for site 444306122144600 (usgs.gov)



USGS assisting with the annual profiler deployment



Sunrise on Detroit Lake

Post Wildfire Monitoring Results - 2022

Primary Drinking Water Standards					
Inorganic Chemicals			**EPA Standard**	**Detected Level**	
				Little North Santiam River	John Neal Park
Barium (dissolved)	mg/L		2	ND	0.0025
Barium (total)	mg/L		2	0.024	0.017
Copper (dissolved)	mg/L		1.3	ND	ND
Copper (total)	mg/L		1.3	0.0086	0.0052
Nitrate	mg/L		10	0.39	0.33
Secondary Drinking Water Standards and other Parameters					
Alkalinity	mg/L		n/a	5.7	11
Bicarbonate Alkalinity	mg/L		n/a	6.9	14
Calcium (total)	mg/L		n/a	3.9	ND
Calcium (dissolved)	mg/L		n/a	2.1	ND
Dissolved Organic Carbon	mg/L		n/a	1.3	1.3
Specific Conductance (25 C)	µmho/cm		n/a	21	32
Total Hardness	mg/L		250	14	16
Magnesium (total)	mg/L		n/a	1.6	1.4
Magnesium (dissolved)	mg/L		n/a	0.4	0.74
Orthophosphate as P	mg/L		n/a	0.13	0.087
Orthophosphate as PO4	mg/L		n/a	0.4	0.27
Silica	mg/L		n/a	23	20
Sodium	mg/L		n/a	1.9	2.4
Strontium (total)	mg/L		4	0.032	0.031
Strontium (dissolved)	mg/L		4	0.014	0.02
Total Dissolved Solids	mg/L		500	14	39
Total Organic Carbon	mg/L		n/a	1.8	1.8

Primary Drinking Water Standards: legally enforceable standards and treatment techniques to protect public health.

Secondary Drinking Water Standards: non-enforceable guidelines for contaminants that cause aesthetic or cosmetic effects.

North Santiam Canyon Resiliency Continues After 2020 Fires

On September 7, 2020, a rare wind event caused a small fire, known as the Beachie Creek Fire, to explode in size from 500 acres to over 130,000 acres in a matter of hours. Almost simultaneously, the Lionshead Fire, located east of the Beachie Creek Fire, burned through the Warm Springs Reservation and Mount Jefferson Wilderness before merging with the Beachie Creek Fire. Combined, these fires burned almost 400,000 acres, and over fifty percent of the North Santiam Watershed.


North Santiam River

Wildfires can negatively impact water quality for years after the fire and have extensive impacts on a watershed's ecological function. Impacts such as erosion, flooding, high turbidity events, nutrient exportation, and heavy metal loads are some of the biggest hurdles drinking water providers face post fire.

Numerous agencies, including the City of Salem, have continued to monitor water quality and work towards a more resilient North Santiam Watershed. The North Santiam Watershed Council (NSWC) is one essential group in the canyon that has been a long-term partner of the City. Since the 2020 fires, the NSWC has worked with affected landowners to help rehabilitate the area. Much of their work includes planting native plant species and reducing invasive plant species in the area, which helps to stabilize banks and minimize hazardous trees in burnt areas.

The NSWC has been a successful steward of the watershed, completing additional projects such as:

- Planting over 50,300 native plants along 40 acres of riparian corridor on the North Santiam River and Little North Santiam on private properties impacted by fires.
- Planting 91,550 Douglas fir and Western red cedars on private properties impacted by fires.
- Hosting a Free Tree Giveaway distributing 110,000 native plants and trees to over 177 landowners in partnership with Marion County, Santiam Long Term Recovery Group, Bonneville Environmental Foundation, and the Oregon Department of Forestry.
- Conducting plant restoration work on 168 acres of Oregon white oak savanna, wet prairie, and riparian ecosystems along Bear Branch Creek.
- Surveying over 400 acres for post-wildfire properties to detect early establishments of invasive plant species to treat them before they can become fully established. Continued treatment and surveying for invasive species such as knotweed, false brome, meadow knapweed and yellow archangel in the Beachie Creek and Lionshead Fire perimeter.
- Conducting treatment of invasive aquatic plants, such as Ludwigia and yellow flag iris, on nearly 53 acres and surveyed four stream miles between Stayton Bridge and Buell-Miller Ramp.
- Hosted a weed-pull event in North Santiam State Recreation Area.
- Hosted a broom-making workshop to create usable household brooms from invasive Scotch broom.
- Hosted a workshop about native plant propagation and empowered landowners to seek out native plants sustainably to increase biodiversity on their properties.

City of Salem - Pringle Creek

Clean Streams
CLEAR CHOICES

A City of Salem Initiative

There are many ways you can get involved in the City of Salem's Clean Streams Initiative and help protect stream water quality right from home.

- Join the Capital Canine Club by pledging to always pick up after your pet.
- Take the WE Pledge to reduce pollution and conserve water.
- Download a DIY guide for creating a rain garden on your property.
- Download the Clean Streams Superhero Activity book for youth.

You can find all of this and more on our website, www.CleanStreamsSalem.org.

You can also sign up for the monthly e-newsletter, Stream Currents, for water-related news, a Clean Streams tip of the month, and to keep up to date on city water-related projects.

Ways to Use Water Wisely

When temperatures rise so does water demand as Salem water customers use drinking water for outdoor activities such as washing cars, watering lawns, filling pools, and cleaning outside areas. Salem water use nearly doubles in the summer and can peak at nearly 50 million gallons of water use per day!

Help use water efficiently by making a few small changes to everyday activities.

- Fix outdoor leaky faucets.
- Sweep sidewalks and patios instead of washing them down.
- Adjust sprinkler heads to avoid watering the sidewalk and driveway.
- Turn off the faucet while brushing your teeth.
- Fix broken sprinkler heads.
- Run the dishwasher only when full.
- Use a hose nozzle for outside watering activities.
- Use 1 inch of water per week to keep your lawn healthy.
- Run only full loads of clothes.
- Take shorter showers.
- Adjust your irrigation systems when weather is cooler and rainy.

Take the WE Pledge to Help Protect local Waterways

You can pledge to conserve water, reduce stormwater pollution, increase recycling, reduce plastic waste, and more by taking the Clean Streams Initiative's WE Pledge. Together WE Pledge to keep stormwater clean, streams pollution free, and be good stewards of the environment. You can take the WE Pledge by visiting www.CleanStreamsSalem.org. clean, streams pollution free, and be good stewards of the environment. You can take the WE Pledge by visiting www.CleanStreamsSalem.org.

City Offers Free Conservation Kits to Salem Water Customers

Retrofitting existing fixtures can help reduce the amount of water used daily and save money on your utility bill. It also leaves more water in the river for wildlife and fish. The City offers free indoor and outdoor water conservation kits to Salem water customers. To request a free water conservation kit, please call the Water Quality Hotline at 503-588-6323, or email us at water@cityofsalem.net.

Salem Utility Customers Benefit from Bill Assistance Programs

Need assistance paying your City of Salem water, sewer, and stormwater utility bill?

We can help! The City has financial assistance programs for low-income households including a monthly bill discount, emergency payment assistance, and payment arrangements for qualifying residential customers.

The City partners with local service agencies to provide financial assistance to low-income households needing help paying their bill. For more information, visit www.cityofsalem.net/bill-assistance, call our Utility Customer Care Team at 503-588-6099, Monday through Friday, 8:00 a.m. to 5:00 p.m., or email UtilityBilling@cityofsalem.net.

Payment Arrangements

Need a little extra time to pay your current utility bill? You may be eligible to set up a payment arrangement to extend the due date of your current bill. Contact our Utility Customer Care Team for more information about payment arrangements.

Emergency Utility Assistance Program

Experiencing a short-term need for help with your utility bill? You may be eligible for up to $500 of assistance towards your current and past due single-family residential utility bill every 12 months. This program is supported by donations from our customers and the community with matching funds from the City. Customers are qualified by St. Vincent dePaul and The Salvation Army. For information on how to apply or to learn how you can help support the program visit www.cityofsalem.net/bill-assistance

Utility Rate Relief Program

Customers aged 60 and older, or disabled, with a household income at or below 60% of State Median Income may be eligible for a monthly discount on the sewer portion of their City of Salem utility bill and may also qualify for a discount on their garbage bill. The Mid-Willamette Valley Community Action Agency qualifies customers for this program. Visit www.cityofsalem.net/bill-assistance for information on how to apply for the program.

Ways to Get Involved

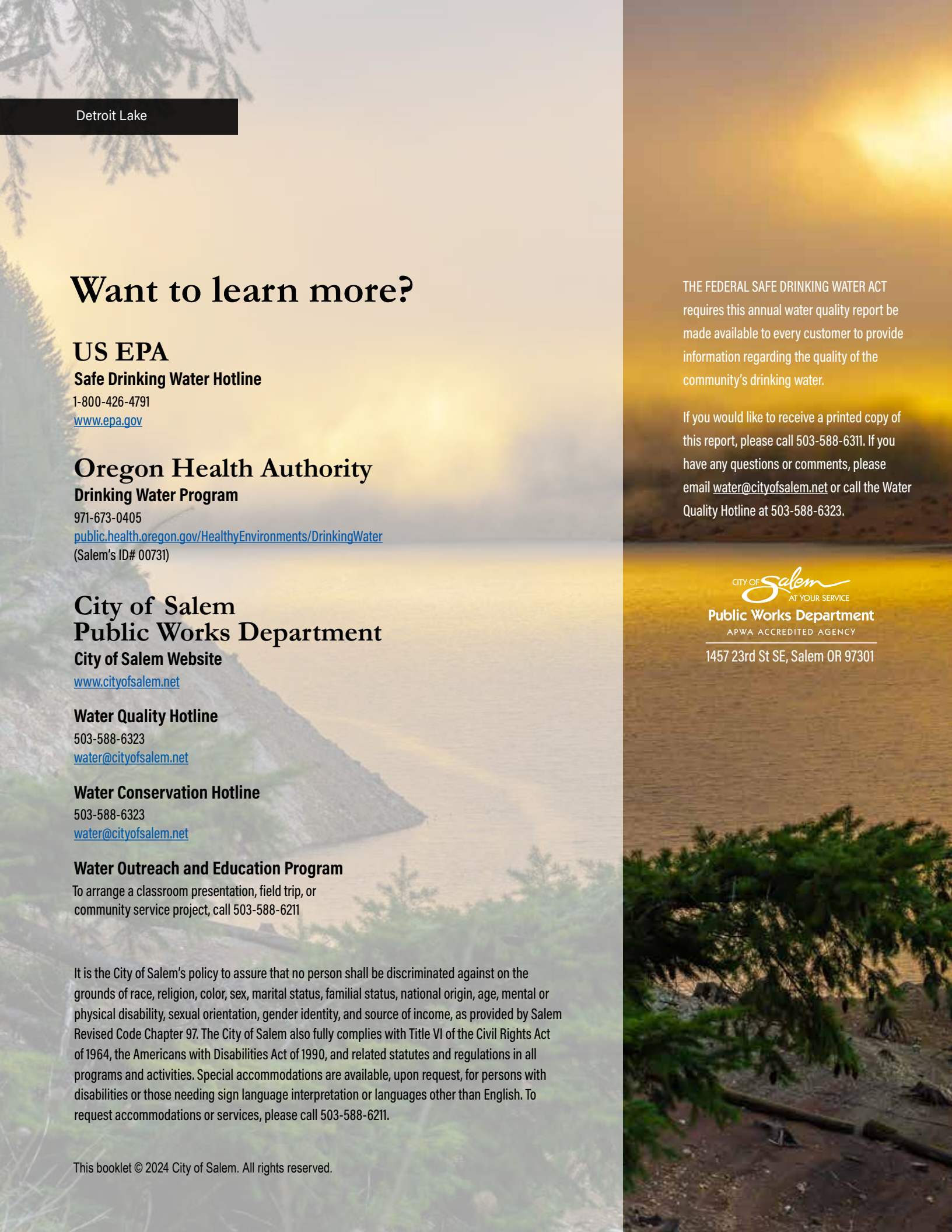
Salem City Council

Salem City Council is the policy-making body for Salem's water system. Meetings are held to allow Council to conduct business, make decisions, and formulate policy in a public forum. These meetings also provide an opportunity for the community to give input on issues and policies under consideration by the City. The Council meets on the 2nd and 4th Monday of each month at 6 p.m. In December, the Council meets on the 1st and 2nd Monday at 6 p.m. You can attend Salem City Council meetings both in-person and remotely. You can access meeting agendas online and learn more about how you can participate in a Council meeting. Watch the Council meetings live on CCTV, channel 21, with replays during the week, stream the meeting live on Facebook or YouTube or in archive form online. Feel free to call at 503-588-6255 or visit www.cityofsalem.net/city-council for more information.

North Santiam Watershed Council

The North Santiam Watershed Council (NSWC) is a 501(c)(3) non-profit made up of local volunteers who act together to provide opportunities for stakeholders to cooperate in promoting, improving, and sustaining the health and economy of the North Santiam River Watershed and its communities. This organization facilitates large and small-scale restoration projects and hosts project tours, tree plantings, and river clean-ups. Each year, the NSWC applies for a grant from the City to help with operational costs and tree plantings. The NSWC hosts virtual meetings that are open to the public and are held every 3rd Tuesday of each month (except December) at 6 p.m. via Zoom. Feel free to call 503-930-8202 if interested in participating in a meeting or visit www.northsantiam.org for more information.

At least 120 times per month Salem's Water Quality Technician analyzes and collects samples of water throughout the distribution network.



Detroit Lake

Want to learn more?

US EPA

Safe Drinking Water Hotline
1-800-426-4791
www.epa.gov

Oregon Health Authority

Drinking Water Program
971-673-0405
public.health.oregon.gov/HealthyEnvironments/DrinkingWater
(Salem's ID# 00731)

City of Salem Public Works Department

City of Salem Website
www.cityofsalem.net

Water Quality Hotline
503-588-6323
water@cityofsalem.net

Water Conservation Hotline
503-588-6323
water@cityofsalem.net

Water Outreach and Education Program
To arrange a classroom presentation, field trip, or community service project, call 503-588-6211

It is the City of Salem's policy to assure that no person shall be discriminated against on the grounds of race, religion, color, sex, marital status, familial status, national origin, age, mental or physical disability, sexual orientation, gender identity, and source of income, as provided by Salem Revised Code Chapter 97. The City of Salem also fully complies with Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, and related statutes and regulations in all programs and activities. Special accommodations are available, upon request, for persons with disabilities or those needing sign language interpretation or languages other than English. To request accommodations or services, please call 503-588-6211.

THE FEDERAL SAFE DRINKING WATER ACT requires this annual water quality report be made available to every customer to provide information regarding the quality of the community's drinking water.

If you would like to receive a printed copy of this report, please call 503-588-6311. If you have any questions or comments, please email water@cityofsalem.net or call the Water Quality Hotline at 503-588-6323.

CITY OF Salem AT YOUR SERVICE
Public Works Department
APWA ACCREDITED AGENCY
1457 23rd St SE, Salem OR 97301