# 2019 Annual Water Quality Report 



## To our valued customers,

I am pleased to present the 2019 Annual Water Quality Report to you. The report contains important information about your drinking water, including where it comes from, how it is treated, and what, if any, contaminants it may contain. While many components of the report are mandated by the Environmental Protection Agency (EPA), the City of Salem prides itself in providing a more comprehensive and transparent report that is accessible to all our customers.

For that purpose, I must unfortunately report that algal toxins were detected in the distribution system in the early summer of 2018, specifically Cylindrospermopsin and Microcystin. At the time of this event, both toxins were listed on the Environmental Protection Agency's unregulated contaminant list, meaning water systems are not required to perform regular testing. However, in an effort to protect public health, the City of Salem voluntarily collects water samples within the watershed, throughout the treatment process and distribution system. This was performed daily during the extent of the algae bloom event. Preliminary results of these samples showed concerning toxin levels, which led to the issuance of two "Do Not Drink" notices for specific vulnerable populations.

With the exception of the algal toxin event, City of Salem drinking water met or surpassed every public health requirement-more than 120 drinking water standards-set by the Oregon Health Authority and the EPA.

Water is the most valuable natural resource in the world today, and the City of Salem is fortunate to have an extremely high-quality, reliable, and abundant source. It's easy to take this precious resource for granted until you learn about the troubles other areas of the United States and the world are experiencing with their water supply. We often forget about the treatment process, hundreds of miles of water mains, pump stations, reservoirs, and dedicated staff it takes to deliver water to the average residential customer for less than a penny a gallon.

As always, the City of Salem strives to deliver high-quality water to your tap, as well as provide 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
503-588-6211

This booklet © 2019 City of Salem. All rights reserved.

## Precipitation that falls in the mountains supplies most of our fresh water

## $=$ <br> $\mathrm{H}_{2} \mathrm{O}$

## 

Water is the most valuable satural resource in the world today

City of Salem
Continues with
Electronic Delivery
of Annual Water Quality Report

With ongoing successes, the City of Salem continues to provide the Annual Water Quality Report via electronic delivery to provide faster accessibility and reduction in costs affiliated with printing and mailing. Hard copies of the reports are available at the Salem Civic Center, or can be requested by calling (503) 588-6333.


An average American uses 176 gallons of water every day

## 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 EPA's Safe Drinking Water Hotline (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 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 (800-426-4791),

## ¿Español?

Este documento contiene información sobre el agua potable y el origen. Si usted desea recibir una copia de este documento en español, por favor llame al 503-588-6323 y pida una copia del reporte de calidad de agua o visite nuestra página electrónica 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 503-588-6323 and ask for a water quality report or visit our website at www.cityofsalem.net/water.

## Please Share!

If you are a manager or owner of a business or multifamily dwelling, please share this report with your employees or residents. If you would like additional copies, please call the Water Quality Hotline at 503-588-6323.

## 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 material, and can pick up contaminants resulting from the presence of animals or human activity. Contaminants that may be present in any source water include:

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 may come 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, and auto and mechanical shops.

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

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administrative 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 completed in 2003 with assistance from the Oregon Department of Environmental Quality (ODEQ). As of December 2018, ODEQ revised an Updated Source Water Assessment to all drinking water providers in the state. The updated report is now available and it provides an inventory of potential contaminant sources that could pose a risk to the water quality of the North Santiam River, which is Salem's primary drinking water source. As required by the Federal Safe Drinking Water Act, the assessment also identifies sensitive areas along the river where the water supply may be more vulnerable to impact by these potential contaminant sources. These sensitive areas include those close to bodies of water, and areas where runoff and erosion potentials are highest. The updated assessment is intended to provide more detailed information and resources to assist drinking water providers and their community in implementing local drinking water protection efforts. This information may assist with supporting restoration projects within the watershed.

## Contaminants in Drinking Water

The City continues to monitor activities that may impact its drinking water source, within the North Santiam River Watershed.

The City works together with federal and state agencies, as well as groups, nonprofits, and individuals to reduce these impacts to the drinking water source. Throughout the year, City employees collect water samples and monitor the water quality at various sites within

Salem city limits and in the watershed to assure safe and high quality water be provided to its customers.

Salem's original and updated Source Water Assessment reports are available on the City's website at www.cityofsalem.net/water. The report is also available by calling the Water Quality Hotline at 503-588-6323, or by emailing a request to water@cityofsalem.net.

## Salem's Source for Drinking Water

FOR MORE THAN 80 YEARS, the City of Salem has been getting its drinking water supply from the North Santiam River. This high quality river source flows over 90 miles from the high ridges near Mt. Jefferson, through Detroit Reservoir, and down to the Mid-Willamette Valley where it meets with the Willamette River. The North Santiam Watershed is an area of about 760 square miles! It provides clean and pristine river water for many canyon communities along its route. Due to the river's high quality water, it is suitable for a more natural filtering process 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 processes over time. As of the summer of 2018, the City has incorporated additional barriers for mitigation and removal of contaminants. Long-term improvements to the treatment process will occur in the next few years. Following the slow sand filtration process, the water is further disinfected by adding a regulated amount of sodium hypochlorite (liquid chlorine), fluorosilicic acid (liquid fluoride) for fluoridation, and sodium carbonate (soda ash) which adjusts the pH and minimizes the corrosion of lead and copper from household plumbing. From the treatment facility, the water is transported by gravity to Salem, distributed throughout the city and stored within the 17 reservoir systems located around the city.

Additionally, the City utilizes an Aquifer Storage and Recovery (ASR) system, located underground in south Salem, to store and recover finished water. During the winter months, when flows in the river are high and there is a low demand for water by customers, treated drinking water is injected into the ASR system. The water is stored in a naturally existing groundwater aquifer located 350 feet below Woodmansee Park. During the summer months, when the river is flowing low and customer water demand is high, water is pumped back to the surface and recovered from the ASR system. The recovered water is treated with calcium hypochlorite (chlorine) for disinfection and then conveyed to the distribution system, serving the south Salem water customers.

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? 

The supply of Salem's water begins with a raindrop or snowflake that falls on the west side of the Cascade Range, near Mt. Jefferson and Three Fingered Jack. As that drop melts and moves downhill, it flows over land and through soil into the North Santiam River. It is stored briefly in Detroit Reservoir until it is released through the dams and flows towards other canyon communities and the City of Salem. For more information about the North Santiam Watershed, visit the City's website to take a virtual watershed tour.

## Salem's Water System serves a

 population of 192,800 daily from the North Santiam River

## What Is in Salem's Drinking Water?

## 2018 Water Quality Data

from Geren Island Treatment Facility, Distribution System, and Salem Water Customers

| TEST | $\begin{aligned} & \text { DATE } \\ & \text { TESTED } \end{aligned}$ | UNIT | MCLG (MRDLG) | MCL (MRDL) | DETECTED LEVEL | LOWEST RANGE | HIGHEST RANGE | VIOLATION | MAJOR SOURCES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inorganic |  |  |  |  |  |  |  |  |  |
| Fluoride | 2018 | ppm | 4 | 4 | Average: 0.64 | 0.58 | 0.77 | NO | Erosion of natural deposits; water additive-promotes strong teeth |
| Copper | 2018 | ppm | 1.3 | AL $=1.3$ | 0.026 | One sampl | collected | NO | Corrosion of household plumbing systems |
| Nitrate | 2018 | ppm | 10 | 10 | 0.10 | One sampl | collected | NO | Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits |
| Nitrate-Nitrite | 2018 | ppm | 10 | 10 | 0.10 | One sampl | collected | NO | Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits |
| Barium ${ }^{1}$ | 2016 | ppm | 2 | 2 | 0.002 | One sampl | collected | NO | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Copper ${ }^{1}$ | 2016 | ppm | 1.3 | $\mathrm{AL}=1.3$ | 90th Percentile: 0.342 Homes exceeding: 0 | <0.03 | 0.56 | NO | Corrosion of household plumbing systems |
| Lead ${ }^{1}$ | 2016 | ppb | 0 | $\mathrm{AL}=15$ | 90th Percentile: 5.9 Homes exceeding: 2 | < 1.0 | 23 | NO | Corrosion of household plumbing systems |
| Microbiological |  |  |  |  |  |  |  |  |  |
| Turbidity | 2018 | NTU | N/A | TT | $100 \%$ of samples meet turbidity standards Average: 0.11 | 0.05 | 0.47 | NO | Erosion and soil runoff |
| Total coliform | 2018 | No units | N/A | TT | 1,440 samples collected | None | $\begin{gathered} 0 \text { positive } \\ \text { of } 120 \\ \text { samples } \\ \text { or } 0.0 \% \end{gathered}$ | NO | Naturally present in the environment |
| E. coli bacteria | 2017 | 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 | 2018 | ppb | 0 | 60 | Locational Running Annual Average: 32 | ND | 52 | NO | By-product of drinking water disinfection |
| Total Trihalomethanes | 2018 | ppb | 0 | 80 | Locational Running Annual Average: 32 | 9.2 | 47 | NO | By-product of drinking water disinfection |
| Haloacetic acids ${ }^{1}$ | 2017 | ppb | 0 | 60 | Entry Point: 12 | One sampl | collected | NO | By-product of drinking water disinfection |
| Total Trihalomethanes | 2018 | ppb | 0 | 80 | Entry Point: 6.3 | One sampl | collected | NO | By-product of drinking water disinfection |
| Total Organic Carbon | 2018 | ppm | N/A | TT | Raw Water Annual Average: 0.97 | 0.88 | 1.0 | NO | Naturally present in the environment |
| Chlorine Residual | 2018 | ppm | 4.0 | 4.0 | Entry Point Average: 1.37 | 0.97 | 2.38 | NO | Remaining chlorine from disinfection process |
| Organic Constituents |  |  |  |  |  |  |  |  |  |
| 2, 4-D ${ }^{1}$ | 2017 | ppb | 70 | 70 | 0.11 | ND | 0.11 | NO | Runoff from herbicide used on row crops |
| Unregulated Constituents |  |  |  |  |  |  |  |  |  |
| Sodium | 2018 | ppm |  | $20^{2}$ | 5.6 | One sampl | collected | NO | Erosion of natural deposits |


| 2018 Water Quality Data |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| from Aquifer Storage and Recovery Wells |  |  |  |  |  |  |  |  |  |
| TEST | $\begin{aligned} & \text { DATE } \\ & \text { TESTED } \end{aligned}$ | UNIT | $\begin{gathered} \text { MCLG } \\ \text { (MRDLG) } \end{gathered}$ | $\begin{gathered} \text { MCL } \\ \text { (MRDL) } \end{gathered}$ | DETECTED LEVEL | LOWEST RANGE | HIGHEST RANGE | VIOLA | MAJOR SOURCES |
| Inorganic |  |  |  |  |  |  |  |  |  |
| Barium ${ }^{1}$ | 2017 | ppm | 2 | 2 | 0.0022 | One sample | e collected | NO | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride | 2018 | ppm | 4 | 4 | 0.38 | One sample | e collected | NO | Erosion of natural deposits; water additivepromotes strong teeth |
| Radioactive Constituents |  |  |  |  |  |  |  |  |  |
| Combined Radium ${ }^{1}$ | 2014 | pCi/L | 0 | 5 | 1.01 | One sample | e collected | NO | Erosion of natural deposits |
| Disinfection By-Products, By-Product Precursors, and Disinfectant Residual |  |  |  |  |  |  |  |  |  |
| Haloacetic acids | 2018 | ppb | 0 | 60 | ND | One sample | e collected | NO | By-product of drinking water disinfection |
| Total Trihalomethanes | 2018 | ppb | 0 | 80 | 4.1 | One sample | e collected | NO | By-product of drinking water disinfection |
| Total Organic Carbon | 2018 | ppm | N/A | TT | 0.33 | One sample | e collected | NO | Naturally present in the environment |
| Organic Constituents |  |  |  |  |  |  |  |  |  |
| Hexachlorocyclopentadiene ${ }^{1}$ | 2017 | ppb | 0 | 50 | 0.061 | One sample | e collected | NO | Discharge from chemical factories |
| Unregulated Constituents |  |  |  |  |  |  |  |  |  |
| Sodium | 2018 | ppm |  | $20^{3}$ | 10 | One sample | e collected | NO | Erosion of natural deposits |

${ }^{1}$ The City of Salem is required to report any detected contaminant within the last five years.
${ }^{2}$ 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.

## 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.

## 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.

## 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.

| Cyanotoxin Test Results* |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SITE LOCATION | TEST | DATE TESTED | UNIT | HEALTH ADVISORY LEVEL FOR VULNERABLE POPULATION | HEALTH ADVISORY LEVEL FOR ALL POPULATION | LOWEST RESULT | HIGHEST RESULT | ADVISORY ISSUED? | ADVISORY TYPE | ADVISORY DATES |
| Finished Water-Entry Point: Aldersgate | Microcystin | $\begin{gathered} \text { May-October } \\ 2018 \end{gathered}$ | ppb | 0.3 | 1.6 | ND | 0.7545 | YES | Vulnerable Population | May 29-June 2, June 6-July 3 |
|  | Cylindrospermopsin |  |  | 0.7 | 3 | ND | 6.9635 |  |  |  |
|  | Anatoxin-a |  |  | 0.3 | 1.6 | ND | 0.0123 |  |  |  |
| Distribution Sample Site: Nebraska | Microcystin | May-July 2018 | ppb | 0.3 | 1.6 | ND | 0.2590 | YES | Vulnerable Population | May 29-June 2, June 6-July 3 |
|  | Cylindrospermopsin |  |  | 0.7 | 3 | ND | 1.9022 |  |  |  |
|  | Anatoxin-a |  |  | 0.3 | 1.6 | ND | 0.0667 |  |  |  |
| Distribution Sample Site: Doral | Microcystin | May-July 2018 | ppb | 0.3 | 1.6 | ND | 0.7460 | YES | Vulnerable Population | May 29-June 2, June 6-July 3 |
|  | Cylindrospermopsin |  |  | 0.7 | 3 | ND | 0.0422 |  |  |  |
|  | Anatoxin-a |  |  | 0.3 | 1.6 | ND | 0.0248 |  |  |  |
| Distribution Sample Site: Lake Vanessa | Microcystin | May-July 2018 | ppb | 0.3 | 1.6 | ND | 0.3829 | YES | Vulnerable Population | May 29-June 2, June 6-July 3 |
|  | Cylindrospermopsin |  |  | 0.7 | 3 | ND | 0.0318 |  |  |  |
|  | Anatoxin-a |  |  | 0.3 | 1.6 | ND | 0.0272 |  |  |  |
| Distribution Sample Site: Countryside | Microcystin | May-July 2018 | ppb | 0.3 | 1.6 | ND | 2.3746 | YES | Vulnerable Population | May 29-June 2, June 6-July 3 |
|  | Cylindrospermopsin |  |  | 0.7 | 3 | ND | ND |  |  |  |
|  | Anatoxin-a |  |  | 0.3 | 1.6 | ND | 0.0062 |  |  |  |

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

Algal blooms are a natural occurrence throughout the United States and the world. Algae has been seen in Detroit Reservoir, Salem's drinking water source, from as early as April through the summer and into October. May of 2018 was an unusually different event in which cyanotoxin levels were higher than seen before at Detroit-and we saw cyanotoxins in our water distribution system for the first time. This caused the City of Salem to issue a drinking water advisory.

The City will continue to work diligently to monitor and collect water quality samples to ensure safe drinking water for Salem. If the levels reach the Environmental Protection Agency (EPA) Health Advisory notification threshold, the City will issue an advisory. The City will continue to provide water quality updates on its website.

## Definitions

## ND

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

## Harmful Algae Bloom

A dense colony of cyanobacteria that can rapidly multiply in surface waters when environmental conditions are favorable for growth.

## Cyanobacteria

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

Total microcystins and cylindrospermopsin produced by cyanobacteria.

Consuming water containing concentrations of cyanotoxins over the health advisory level for more than 10 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 2018 specific to cyanotoxins are available on the City of Salem's website. For more detailed information on the the monitoring program and the data results of cyanotoxins, please visit the City of Salem website under: www.cityofsalem.net/Pages/water-quality-test-data.aspx

## Other Results

Turbidity is a measure of water's clarity. High turbidity (muddy water) results from suspended soil and organic matter in water. This can increase the risk of contamination by interfering with the drinking water treatment process. All of the City's turbidity samples were below required levels.

Radon is a naturally-occurring radioactive gas found throughout the United States, more often in groundwater than surface water. Radon levels taken from Salem's Aquifer Storage and Recovery (ASR) wells are consistent with levels typically found in Salem area groundwater.

## Unregulated Contaminant Monitoring Rule

Round 4 (UCMR4) First and Second Quarter Detected Contaminant Results
The Unregulated Contaminant Monitoring Rule (UMCR) 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 fourth round of UCMR (UCMR4) requires monitoring for 30 chemical contaminants including cyanotoxins, metals, pesticides, total organic carbon (TOC), haloacetic acid groups (HAA5, HAABr, HAA9) from disinfection byproducts, alcohols, and semivolatile organic chemicals. More information about the UMCR is available from the Safe Drinking Water Hotline at 1-800-426-4791.

The City of Salem began the UCMR4 sampling in July 2018. The City completed biweekly sampling for cyanotoxins from July through October 2018. All other samples are collected quarterly beginning July 2018.

The table below lists only those unregulated contaminants which were detected during the July and October 2018 sampling events.

| DETECTED ANALYTE | DATE TESTED | UNIT | MRL $^{1}(\mathrm{ppb})$ | DETECTED LEVEL | RANGE |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TOC | 2018 | ppm | -- |  | 0.89 | 1.1 |
| HAA5 | 2018 | ppb | -- | Average: 21.6 | 1.3 | 37 |
| HAABr | 2018 | ppb | -- | Average: 1.7 | ND | 3.5 |
| HAA9 | 2018 | ppb | -- | Average: 23.3 | 1.3 | 39 |

[^0]
## Lead and Copper Sampling to Occur this Summer

LEAD AND COPPER SAMPLING is scheduled for this summer. The City is currently on reduced monitoring which requires sampling every three years. The City of Salem conducted lead and copper sampling as mandated by the Lead and Copper Rule (LCR) in 2016. From June 1, 2016 through September 30, 2016, 89 water samples were collected from Tier 1 homes and analyzed for lead and copper. Of the 89 samples, only two samples exceeded the Action Level (AL) for lead and none of the samples exceeded the AL for copper.

The Oregon Health Authority requires that the City collect and analyze a minimum of 50 water samples from Tier 1 homes. 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, built between 1983 and 1985, are considered most at risk because of lead or lead-based plumbing components used during construction.

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 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.

[^1]> 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.

## Water Conservation

Ways to Conserve Water: Tips and Resources
During the summer, a high demand of water comes at a period when water resources are already stressed due to
fact: Did you know that as much as 50 percent of water used outdoors is wasted from inefficient watering methods and irrigation systems? hotter temperatures, and drier conditions. The summer water demand almost doubles the winter demand. Below are some ways one can help conserve water.

## Request a Clean Water Presentation

The City of Salem's educational outreach staff provide various presentation topics, activities, and tours pertaining to natural resources and conservation within the city. If you are interested in requesting a presentation or field trip, send an email to stormwateroutreach@cityofsalem.net.

## City Offers Free Conservation Kits to Salem Water Customers

For a free rain gauge, call the Water Quality Hotline at 503-588-6323, or email water@cityofsalem.net.

Retrofitting existing fixtures can help reduce the amount of water used daily and save money on your utility bill, as well as leave more water in the river for wildlife and fish. The City offers free indoor and outdoor water conservation kits to its 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.

## Conservation Resources and Watershed Protection

On average, one person uses over 100 gallons of water per day. Each water customer in the City of Salem can help conserve water by changing daily practices at home, or work. There are many local resources, like Marion Soil \& Water Conservation District (SWCD), OSU Master Gardeners, and the Natural Resources Conservation Services (NRCS), that host events such as Native Plant Sale, and workshops. The City of Salem has a Watershed Protection and Preservation Grant to help assist with local projects that protect or improve the health of our watershed. Both the NRCS and SWCD also have grants and technical assistance for conservation projects.
fact: Drinking water use doubles in the summer months and peaks near 50 million gallons per day. This is primarily due to lawn watering.

## Detroit Dam and Lake Downstream Passage Project

THE ARMY CORPS OF ENGINEERS (CORPS) is in the process of planning and developing a largescale project to provide temperature control and downstream fish passage for endangered fish at Detroit Dam. The Corps is evaluating alternatives and environmental effects in an Environment Impact Statement (EIS) and will select their preferred plan based on this analysis. The City of Salem is closely monitoring the Corps review and actions for this proposed project.

The City of Salem prepared detailed comments addressing all concerns as part of the Public Scoping process. The Public Scoping Report was published in July of 2018. In November of 2018, the Corps released a stored sediment evaluation report which looked at the sediments stored at the bottom of Detroit reservoir. It was determined that the alternatives being considered for this project propose an extremely low drawdown of water, exposing and eroding a large amount of sediment that hasn't been uncovered since the dam was built. All reports are posted on the Corps project website at: https://www.nwp.usace.army.mil/ Willamette/Detroit/fish-passage/

It's important to know that any impact to water quality and water quantity could have drastic effects on Salem's ability to produce reliable, high-quality drinking water to Salem's customers. The City will continue to work hard with other stakeholders to address concerns, and will closely monitor the project as it progresses.

The Corps will host a public information meeting to provide an overview of the draft Environmental Impact Statement between May and June of 2019.

## Salem Families Benefit from Emergency Utility Assistance Program

THE EMERGENCY UTILITY ASSISTANCE PROGRAM, formerly the Low-Income Utility Assistance Program, is dedicated to helping individuals and families facing short-term financial difficulties to pay their City of Salem utility bills. Eligible households may apply for assistance by contacting local service agencies, The Salvation Army or St. Vincent de Paul, to apply for aid. Eligible households may receive $\$ 150$ of assistance during a 12-month cycle. The program is possible due to generous voluntary, tax-deductible donations, and a dollar-for-dollar match up to $\$ 10,000$ annually from the City of Salem. All donated and matched funds are used exclusively for emergency utility assistance.

In 2018, \$18,247 was distributed to 200 families and individuals who would have otherwise faced possible water service disruption. If you would like to learn more about donating to the Emergency Utility Assistance program, or if you are in need of assistance to pay your City of Salem utility bill, please visit www.cityofsalem.net or contact Customer Services Utility Billing at 503-588-6099 for more information.

## Ways to Get Involved!

## Salem City Council

Salem City Council is the policy-making body for Salem's water system. The meetings are held to allow Council to conduct business, make decisions in a public forum, and formulate policy. These meetings also provide an opportunity for you to give input on issues and policies under consideration by the City. The Council meets on the $2^{\text {nd }}$ and $4^{\text {th }}$ Mondays of each month at 6 p.m. (In December, it is the first and second Monday at 6 p.m.) The meetings are open to the public and are held in the City Council Chambers in Room 240 of the Vern Miller Civic Center at 555 Liberty Street SE, Salem, Oregon. Feel free to call at 503-588-6091, or visit www.cityofsalem.net for more information.

## North Santiam Watershed Council

The North Santiam Watershed Council (NWSC) is a 501 (c)(3) nonprofit 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. The Council hosts events such as restoration project tours, tree plantings, and river clean-ups during the year. Each year, the NWSC receives a grant from the City to help with operational costs, and tree plantings. The organization collaborates with the City and Marion County in hosting an annual North Santiam Basin Summit. Watershed Council meetings are open to the public and are held every second Thursday of each month (except December) at 6 p.m. at the Stayton Community Center at 400 West Virginia Street, Stayton, Oregon. Call 503-930-8202 or visit www.northsantiam.org for more information or to inquire about donations.

\$18,247 assisted 200

## local families and individuals

 CLEAR CHOICES


Interested in learning how you can reduce pollution in local streams? The Clean Streams, Clear Choices initiative has a new monthly newsletter. Find out about upcoming outreach events, learn tips on how to reduce pollution, and keep up with current water-related news. Subscribe to Stream Currents today at mailchi.mp/cityofsalem/ cleanstreams.

## Want to Learn More?

US EPA<br>Safe Drinking Water Hotline<br>1-800-426-4791<br>www.epa.gov<br>Oregon Health Authority<br>Drinking Water Program<br>971-673-0405<br>http://public.health.oregon.gov/ HealthyEnvironments/DrinkingWater<br>(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

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 503-588-6333. If you have any questions or comments, please email water@cityofsalem.net or call the Water Quality Hotline at 503-588-6323.


Public Works Department
1410 20TH STREET SE BLDG 2
SALEM OR 97302-1200
PWS - OR4100731


[^0]:    ${ }^{1}$ MRL is the UCMR Minimum Reporting Level

[^1]:    Free Lead Testing for Salem Water Customers

