JUNE 2021

WOODBURN OREGON Incorporated 1889

CITY OF WOODBURN

# 2020 WATER QUALITY REPORT

The City of Woodburn is pleased to present to you this year's **Water Quality Report**. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

The water quality report is required annually by the federal **Environmental Protection Agency** (EPA). Information on the water quality tests conducted on the City's water supply is provided in this report. The word "contaminant" is used throughout the report to describe regulated contaminants detected in the city's drinking water supply. Some of the reported contaminants are naturally occurring organic elements.

The City takes great care in providing safe drinking water to the City of Woodburn residents and water users.

**IMPORTANT HEALTH INFORMATION**

Drinking water, including bottled water, may reasonably be expected to contain at least trace amounts of some "contaminants." The presence of these does not necessarily indicate that the 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).

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/**Centers for Disease Control** (CDC) guidelines on appropriate means to lessen risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Drinking Water Hotline** (1-800-426-4791).

## Water Quality Data Table

| Contaminants | MCLG or MRDLG | MCL, TT or MRDL | Your Water | Sample Date | Violation | Typical Source |
|---|---|---|---|---|---|---|
| ***Inorganic Compounds*** | | | | | | |
| **Arsenic (ppb)** | 0 | 10 | 7 | 2017 | No | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes. |
| **Nitrate [measured as Nitrogen] (ppm)** | 10 | 10 | ND | 2020 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposit |
| **Nitrite [measured as Nitrogen] (ppm)** | 1 | 1 | .014 | 2017 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| **Copper - action level at consumer taps (ppm)** | 1.35 | 1.35 | 0.25 | 2020 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| **Lead - action level at consumer taps (ppb)** | 0 | 15.5 | ND | 2020 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| ***Microbiological Compounds*** | | | | | | |
| **Total Coliform (positive samples/month)** | 0 | 1 | 0 | 2020 | No | Naturally present in the environment |
| ***Disinfection By-Products Precursors, and Disinfectant Residual*** | | | | | | |
| **Haloacetic acids (ppb)** | N/A | 60 | Annual Average 1.77<br>Single Site Range 0-2.5 | 2020 | No | By-product of drinking water disinfection |
| **Total Trihalomethanes (ppb)** | N/A | 80 | Annual Average 1.95<br>Single Site Range 0-2.1 | 2020 | No | By-product of drinking water disinfection |
| **Chloramines Residual (ppm) (Running Annual Average)** | 4 | 4 | 1.26 | 2020 | No | Remaining water additive used to control microbes |
| ***Radioactive Contaminants*** | | | | | | |
| **Beta/photon emitters (pCi/L)** | 0 | 50 | ND | 2017 | No | Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles. |
| **Radium (combined 226/228) (pCi/L)** | 0 | 5 | ND | 2017 | No | Erosion of natural deposits |
| **Uranium (ppb)** | 0 | 30 | ND | 2017 | No | Erosion of natural deposits |

### Unregulated Contaminant Monitoring Report #4

| **Pesticides** | Your Water | Sample Date | Typical Source |
|---|---|---|---|
| Alpha Hexachlorocyclohexane | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Chlorpyrifos | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Dimethin | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Ethoprop | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Oxyfluorfen | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Profenofos | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Tebuconazole | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Permethrin | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |
| Tribufos | ND ug/L | 2020 | Agriculture, urban storm water runoff, and residential uses |

| **Metals** | Your Water | Sample Date | Typical Source |
|---|---|---|---|
| Germanium | ND ug/L | 2020 | Naturally occurring element in semi-conductor manufacture |
| Manganese | 21.2 ug/L | 2020 | Naturally occurring element found in combination with iron |
| **Bromide** | 20 ug/L | 2020 | Present in seawater , concentrate ~ 65 mg/L (~0.2% of dissolved salts) |
| **Total Organic Carbon** | ND ug/L | 2020 | Carbon in organic compound and used as a non-specific indicator of water quality of pharmaceutical manufacturing equipment. TOC may refer also to the amount of organic carbon in soil or a geological formation |

| **SVOC( Semi-Volatile Organic Compounds)** | Your Water | Sample Date | Typical Source |
|---|---|---|---|
| Butylated Hydroxyanisole | ND ug/L | 2020 | Pesticides and herbicides (phosphorus, sulfur, chlorine or nitrogen), flame retardants, cleaning agents, personal care products, solvents/chemicals used in textile/electronic manufacturing and material manufacturing process additives |
| O-Toluidine | ND ug/L | 2020 | Pesticides and herbicides (phosphorus, sulfur, chlorine or nitrogen), flame retardants, cleaning agents, personal care products, solvents/chemicals used in textile/electronic manufacturing and material manufacturing process additives |
| Quinoline | ND ug/L | 2020 | Pesticides and herbicides (phosphorus, sulfur, chlorine or nitrogen), flame retardants, cleaning agents, personal care products, solvents/chemicals used in textile/electronic manufacturing and material manufacturing process additives |

| **Alcohols** | Your Water | Sample Date | |
|---|---|---|---|
| 1-Butanol | ND ug/L | 2020 | Occurs naturally as a minor product of the fermentation of sugars and other carbohydrates, and is present in many foods and beverages. Butanol has been proposed as a substitute for diesel fuel and gasoline. |
| 2-Methoxyethanol | ND ug/L | 2020 | Used as a solvent for varnishes, dyes and resins. Also used as an additive in airplane deicing solutions. |
| 2-Propen-1-Ol | ND ug/L | 2020 | Used as a raw material for the production of glycerol, but is also used as a precursor to specialized compounds like flame-resistant materials, drying oils, and plasticizers. |

## Water Quality Data Table

| Unregulated Contaminant Monitoring Report #4 | | | |
|---|---|---|---|
| **Halo-Acetic Acids** | Your Water | Sample Date | Typical Source |
| Dichloroacetic Acids | 1.6 ug/L | 2020 | Product of water disinfection |
| Monochloroacetic Acid | ND ug/L | 2020 | Product of water disinfection |
| Trichloroacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Monobromoacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Dibromoacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Bromochloroacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Bromodichloroacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Chlorodibromoacetic Acids | ND ug/L | 2020 | Product of water disinfection |
| Tribromoacetic Acids | ND ug/L | 2020 | Product of water disinfection |

## Water Quality Data Table Definitions

The **EPA (Environmental Protection Agency)** regulates the frequency of sampling of various contaminants. The data in the table is from testing conducted from January 1st to December 31st, 2020. It also includes the most recent results for testing not required in 2020.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin for safety.

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

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

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

**MRDLG (Maximum Residual Disinfectant Level Goal)**: 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.

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

**pCi/l**: Picocuries per liter, which is a measure of radioactivity.

**ppb**: Parts per billion or micrograms per liter.

**ppm**: Parts per million or milligrams per liter.

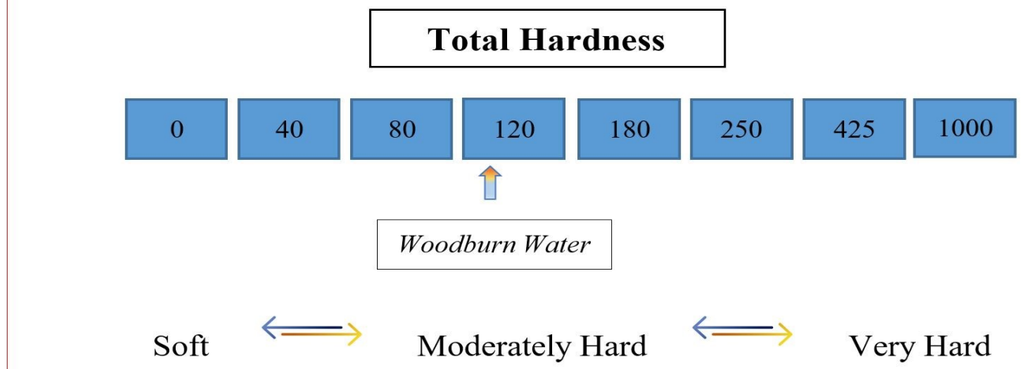
**Range**: The lowest amount to the highest amount of contaminant detected.

**ND (Non Detect):** Laboratory analysis indicates that the contaminant is not present.

**Mgl/(PPM)** = Milligrams per liter/ Parts per million ~ **ND** = None detected ~ **MCL** = Maximum contaminant level

The measurement of milligrams per liter (or parts per million) Mgl/PPM is the mass of a contaminate per unit volume of water. The term is used to express very dilute concentrations of substances.

## Water Hardness




Hard water is water that has high mineral content (in contrast with "soft water"). Hard water is formed when water percolates through deposits of limestone and chalk which are largely made up of calcium and magnesium carbonates.
The City's treatment process does not affect the water hardness. The hardness level of our water averages

## City of Woodburn 20** - Inorganic Compounds

| ***Contaminant*** | ***Mgl/(PPM)*** | ***MCL*** |
|---|---|---|
| Antimony | ND | 0.006 |
| Barium | .0027 | 2.0 |
| Beryllium | ND | 0.004 |
| Cadmium | ND | 0.005 |
| Chromium | ND | 0.1 |
| Cyanide | ND | 0.2 |
| Fluoride | .53 | 4.0 |
| Iron | ND | 0.3 |
| Manganese | ND | 0.05 |
| Mercury | ND | 0.002 |
| Nickel | ND | 0.1 |
| Selenium | ND | 0.05 |
| Sodium | 24.3 | 20 |
| Thallium | ND | 0.002 |

Fluoride: Woodburn water has natural occurring fluoride. The City does not add fluoride to the water.

# Non-Detected Substances

**NONE of the substances listed below were detected during testing in the City of Woodburn drinking water:**

### Synthetic Organic Chemicals

2,4-D
2,4,5-TP (Silvex)
Bis-(2-ethylhexyl) adipate
Alachlor (Lasso)
Atrazine
Benzo-(a)-pyrene
BHC-gamma
Lindane
Carbofuran
Chlordane
Dalapon
Dibromochlorpropane (DBCP)
Dinoseb
Dioxin 6
Diquat dibromide
Endothall
Endrin
Ethylene dibromide (EDB)
Glyphosate
Hepthachlor epoxide
Heptachlor
Hexachlorobenzene
Hexachlorocyclopentadiene
Methoxychlor
Pentachlorophenol
Bis-(2-ethylhexyl) phthalate
Picloram
Polychloronated biphenyls (PCBs)
Simazine
Toxaphene
Vydate (Oxamyl)
3-Hydroxycarbofuran
Aldicarb
Aldicarb sulfoxide
Aldicarb sulfone
Aldrin
Butachlor
Carbaryl
Dicamba
Dieldrin
Methomyl
Metolachlor
Metribuzin
Propachlor

### Volatile Organic Chemicals

1,1-Dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,4-Dichlorobenzene
Benzene
Carbon Tetrachloride
Monochlorobenzene
Cis-1,2-Dichloroethylene
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether
Styrene
Tetrachloroethylene
Toluene
Total Xylenes
Trans-1,2-Dichloroethylene
Trichloroethylene
Vinyl chloride
Dibromochloromethane
Bromoform
Chloromethane
Bromomethane
Chloroethane
2,2 Dichloropropane
1,1-Dichloropropene
1,1-Dichloroethane
Dibromomethane
Trans-1,3-Dichloropropene
1,3-Dichloropropane
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
1,2,3-Trichloropropane
Bromobenzene
2-Chlorotoluene
4-Chlorotoluene
1,3-Dichlorobenzene

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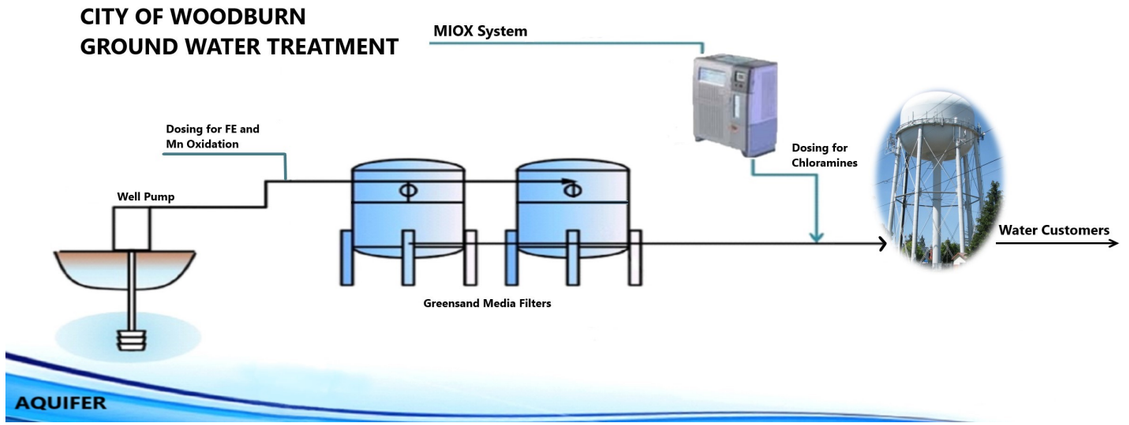
# Woodburn's Water Treatment Processes




The City of Woodburn source is ground water, which draws water from the Troutdale Aquifer utilizing six active wells. Two wells provide raw water to each one of the three water treatment plants to provide water treatment for removal of iron, manganese, arsenic, and radon. Secondary disinfection by the injection of chlorine into the City's water supply to form chloramines was placed in service in May of 2011. The treatment plants are located on National Way, Country Club Road, and Parr Road. Each treatment plant is equipped with chemical feed systems and four pressure filters and on-site sodium hypochlorite generation system. Raw water treated with Potassium permanganate is filtered using pressure filters equipped with media of greensand and anthracite coal.

After filtration, chloramines are introduced, and then the treated water is discharged into finished water reservoirs. As water cascades out of the inlet piping into the reservoirs, radon removal occurs. The water system has ground level storage reservoirs at each water treatment plant and the one elevated storage tank at Cleveland Street for a total storage volume of 5.45 million gallons of treated water.

# What is Groundwater?

Groundwater is water that exists underground in saturated zones beneath the land surface. The upper surface of the saturated zone is called the water table.

Contrary to popular belief, groundwater does not form underground rivers. It fills the pores and fractures in underground materials such as sand, gravel, and other rock, much the same way that water fills a sponge. If groundwater flows naturally out of rock materials or if it can be removed by pumping (in useful amounts), the rock materials are called aquifers.

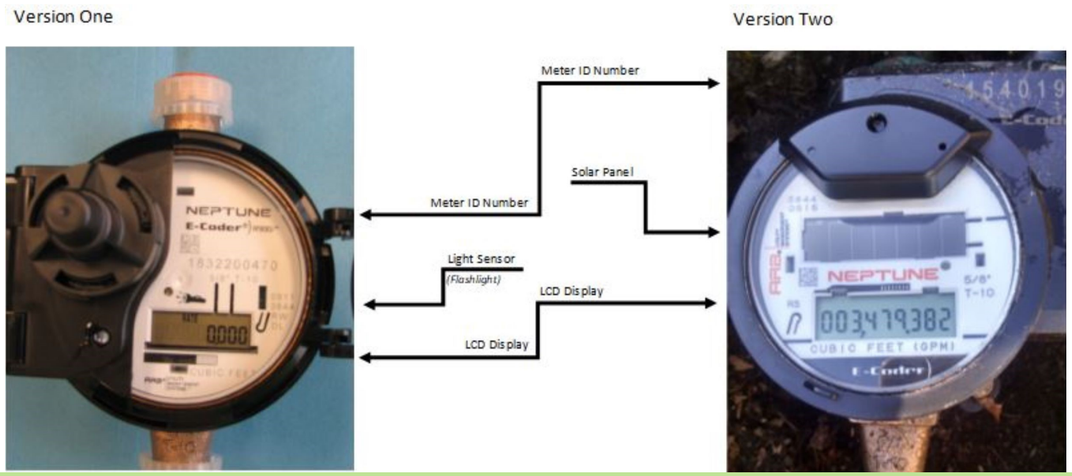
Groundwater moves slowly, typically at rates of 7-60 centimeters (3-25 inches) per day in an aquifer. As a result, water could remain in an aquifer for hundreds or thousands of years.

Groundwater is the source of about 40 percent of water used for public supplies and about 39 percent of water used for agriculture in the United States.

"What is groundwater." USGS, https://www.usgs.gov/faqs/what-groundwater

# Water Meters

The City of Woodburn uses water meters to measure the volume of water delivered to customers. We use Neptune AMR E-coders which are automated meter readers. Each month we drive through your neighborhood collecting radio transmissions from the meters which tell us how much water you consumed. This information is then transmitted to the city's utility billing department so that water bills can be generated. The AMR system is more efficient and accurate than manual reading. In addition, this technology allows the city to retrieve historical water consumption data which can help customers troubleshoot possible leak issues. We have two versions of AMR registers in our system which are distinguished from one another by the screen display and placement of the antenna.




# Reading your Water Meter

How to read your water meter:

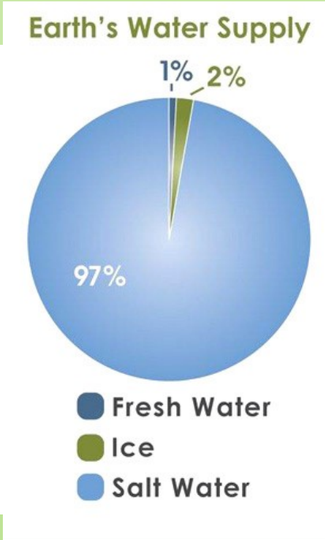
1. Locate the water meter box (usually located near the sidewalk) and remove meter box cover.
2. Open the black cover on the meter register to expose the solar panel (or light sensor depending on your meter version) to sunlight. If it is dark outside, shine a flashlight on it. Bright light will wake up the display.
3. When the LCD display is activated, it will alternate between "Reading" and "Rate."
4. The Reading is total amount of cubic feet of water that has passed through the meter.
5. The Rate is any water that is passing/has passed through the meter recently.
6. If all water is shut off the Rate should be zero. If the meter shows a Rate when the water is shut off, then it indicates a possible leak in your system.

*Read more*

# Water Conservation

Did you know that less than 1% of all the water on Earth can be used by people? The rest is salt water (the kind you find in the ocean) or is permanently frozen and we can't drink it, wash with it, or use it to water plants.

As our population grows, more and more people are using up this limited resource, so it is important that we use our water wisely and not waste it.




# Simple Ways to Save

- **Turn off the Tap!**
  Just by turning off the tap while you brush your teeth in the morning and before bedtime, you can save up to 8 gallons of water! That adds up to more than 200 gallons a month, enough to fill a huge fish tank that holds 6 small sharks!

- **Shower Power!**
  Taking a shower uses much less water than filling up a bathtub. A shower only uses 10 to 25 gallons, while a bath takes up to 70 gallons!

- **Fix That Leak!**
  Fixing a toilet leak is a great way to reduce household water use and boost water conservation. If your toilet has a leak, you could be wasting about 200 gallons of water every day. That would be like flushing your toilet more than 50 times for no reason! Try this experiment: place a drop of food coloring in the toilet tank. If the color shows up in the bowl without flushing, you have a leak!

- **Beat the Heat!**
  Watering your yard first thing in the morning is a great first step to water-efficient landscaping. Avoid watering your yard in the middle of the day. Watering when it's hot and sunny is wasteful because most of the water evaporates before the plants have time to drink it.

- **Who Needs a Hose?**
  An easy way to save water is to use a bucket and sponge when washing cars and bikes. Washing your bike or car with a bucket and sponge instead of a hose saves a lot of water. A hose can waste 6 gallons per minute if you leave it running, but using a bucket and sponge only uses a few gallons!

# Flushing

The City of Woodburn has instituted an annual flushing program to improve water quality and reduce discoloration. Routine flushing is conducted during the winter months. Spot flushing in response to periodic water quality issues is performed throughout the year on a case by case basis.

**The reasons we flush:**

The City of Woodburn's water is clean and safe. It is tested in a lab every week. Samples are constantly monitored for various contaminants in the water supply to meet regulatory requirements. However, even though the water in our system is high quality, the appearance of the water can be impacted if the water mains are not regularly maintained. Flushing removes mineral deposits and aqua flora that may build up over time. When we flush, we run water at a high velocity and discharge it out the fire hydrants. Running the water at this high rate cleanses the pipes.

**What happens "short-term" when we flush:**

While the crew is flushing, customers in the immediate area may experience a reduction in water pressure. Once flushing is complete, pressure will return to normal. Customers in the area may also experience discolored water shortly after flushing is completed. This discolored water is safe and not a health concern. The solution is to run cold water through a faucet that does not have an aerator — like your bathtub or an outside faucet—until the water runs clear. This should resolve any discolored water issues within 5 to 10 minutes.

# Winter Averaging

The City of Woodburn calculates residential sewer rates based on a 3 month "winter" average. A residential customer's average water consumption during the "Service Periods" for January, February and March is used to set their sewer rate for the rest of the year. This means that the sewer portion of a customer's bill will not increase in the summer months due to sprinkling, car washing and filling of swimming pools.

The **last date** of the "Service Period" is considered the bill for that month.

For example, the following are all January bills:

12/9/19 - 1/6/20
12/16/19 - 1/13/20
12/23/19 - 1/20/20
12/30/19 - 1/27/20

The Service Period is shown in the top third of your water bill next to CURRENT BILLING DETAILS.

For more information, call the City of Woodburn at 503-982-5380, or 503-982-5222 option 0.

# Cross-Connections and Backflow Prevention

**What is a cross-connection?**

A cross-connection is an actual or potential connection between potable drinking water and a system or fixture that carries something other than drinking water. Examples of cross-connections include an irrigation system, a fire system, an auxiliary water system (a well), or a garden hose lying in a hot tub.

**What is "backflow?"**

The flow of water in a backward direction. Backflow can occur when water is forced to flow in the opposite direction, i.e. back pressure. It can also occur when there is a pressure drop in the main water system, i.e. back siphonage. A back siphon is possible if a main line breaks or hydrants are opened to flush the system or put out a fire.

**What is a backflow assembly?**

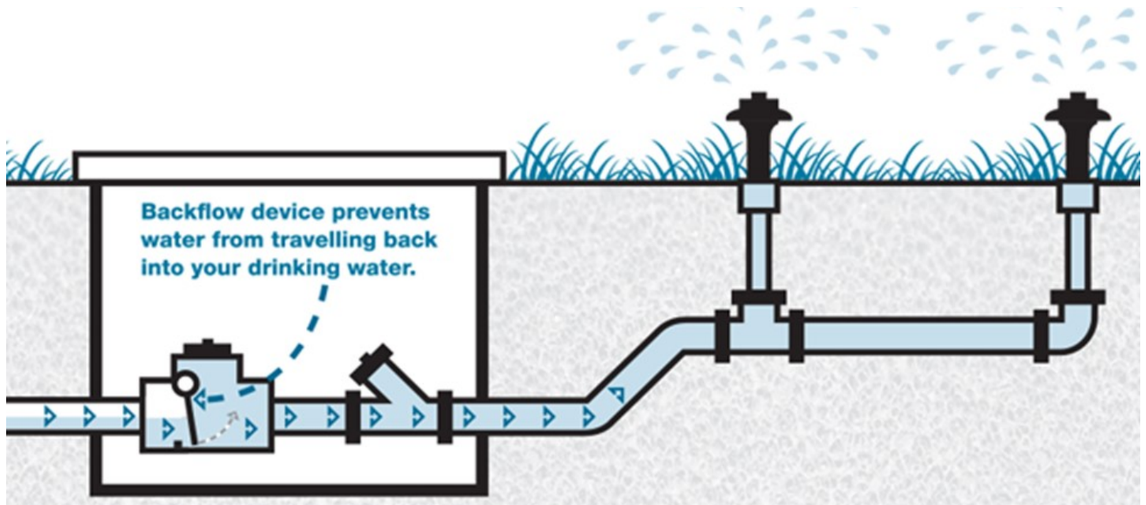
A backflow assembly is a device that allows water to flow in one direction only. It allows water to flow from the city's main line into your home, but it cannot flow backward into the public supply. The sole purpose of a backflow assembly is to protect drinking water from the possibility of contamination.

**Why did I receive a test due notice?**

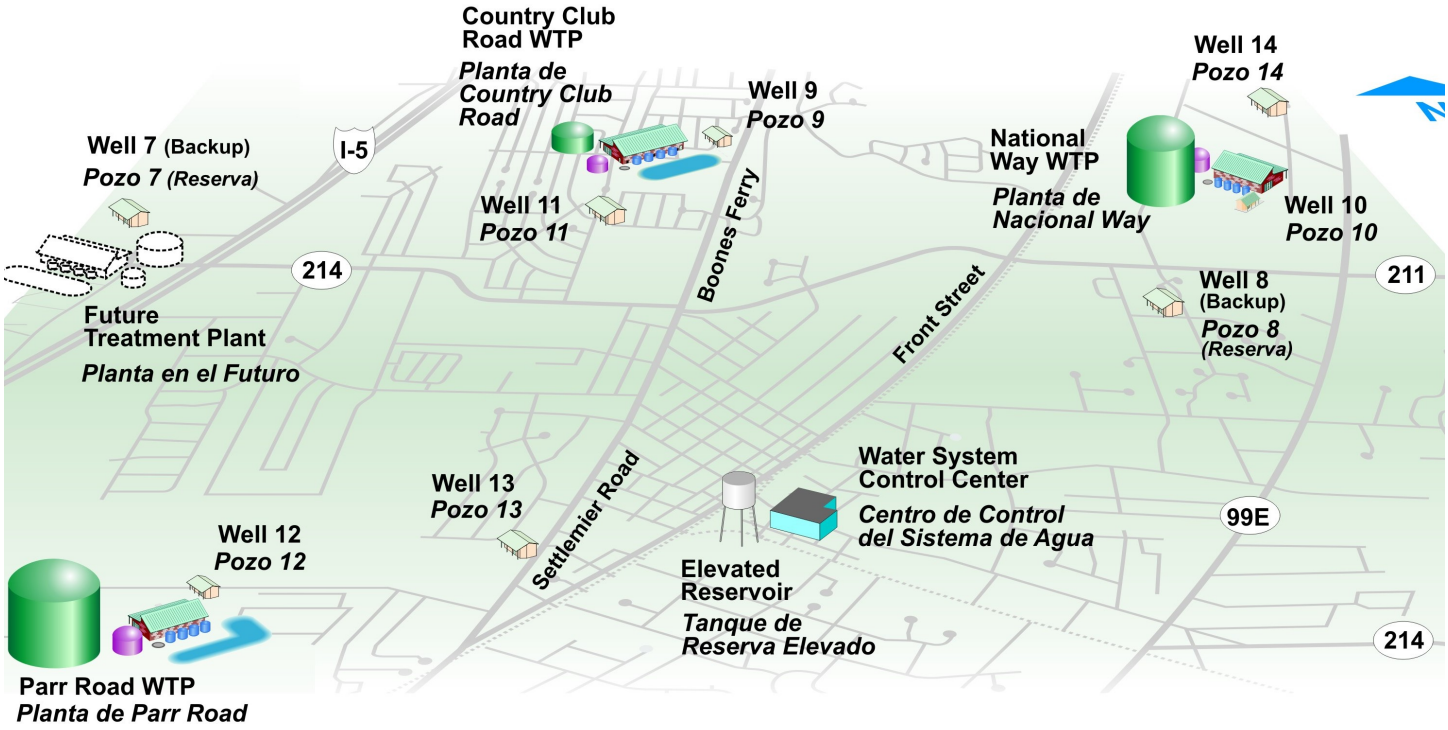
The State requires annual testing of backflow assemblies to make sure they are operating properly. The City oversees the installation and testing of backflow devices, and sends annual reminders when testing is due. It is the property owner's responsibility to arrange for annual testing with a state certified backflow tester. It is the tester's responsibility to transmit the test report to the City.

The City of Woodburn and its citizens share in the duty to protect our drinking water. Thank you for working with us to help keep our water safe.

For more information about backflow protection, contact Byron Brooks, Cross-Connection Specialist at 503-982-5380 byron.brooks@ci.woodburn.or.us



**CITY OF WOODBURN**
270 Montgomery Street
Woodburn, OR 97071




**SOURCE WATER:** Oregon Department of Environmental Quality and Oregon Health Authority completed a Source Water Assessment Report for Woodburn in 2005, as required by the Federal Safe Drinking Water Act for the purpose of identifying potential sources of contamination to source water used for drinking water. The full report is available for review by contacting the City of Woodburn Drinking Water Section, 503-982-5380.

City Council Meetings
are held every second and fourth
Monday of each month at 7:00 PM
City Hall
270 Montgomery Street
Woodburn, OR 97071
(503) 982-5222

More Information regarding this Report contact:

City of Woodburn, Drinking Water Section
202 Young St
Operations Division Manager
Byron Brooks at 503-980-2435
or via email: byron.brooks@ci.woodburn.or.us

http://www.ci.woodburn.or.us/

Oregon Health Authority:
(971) 673-0405
Oregon Health Authority Web Page:

https://www.oregon.gov/oha/ph/healthyenvironments/drinkingwater/
EPA Hotline: 1-800-426-4791
EPA Drinking Water Web page:
https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information