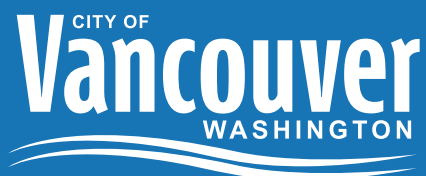




**City of Vancouver**

**2022 Annual**

# **WATER QUALITY REPORT**



VANCOUVER CITY COUNCIL: Mayor Anne McEnery-Ogle

Mayor Pro Tem Ty Stober • Bart Hansen • Erik Paulsen • Sarah J. Fox • Diana H. Perez • Kim D. Harless  
Vancouver City Manager Eric Holmes



## Information for Non-English Speaking Customers/Requesting Other Formats

Please note: This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it. Call 360-487-8177 for help.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.



To request other formats, contact:  
Vancouver Public Works Operations  
360-487-8177 | WA Relay: 711

Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị, hoặc hỏi người nào hiểu tài liệu này.

## Message to Customers: Keeping Your Water Safe

The City of Vancouver is pleased to present its annual Water Quality Report, with results of rigorous testing of our drinking water done by an independent lab that meets state and federal approvals. Test results conducted in 2022 showed Vancouver's water met all federal regulation, and in many cases, was better than Safe Drinking Water Act regulations required.

All of Vancouver's drinking water comes from underground aquifers and is delivered through a closed, protected and monitored system. In keeping with federal and state requirements, our water is treated with a trace amount of chlorine – a safe level that meets health standards for municipal water systems – as an extra precaution to guard against any potential contaminants, including viruses.

Vancouver's Water Utility is the third largest municipal water provider in Washington State, covering a 72-square-mile service area with more than 1,000 miles of water pipe and 40 wells at nine water stations. In 2022, the Utility provided 9.6 billion gallons of water to our more than 270,000 customers. Rates paid by water customers support around-the-clock operations and maintenance, as well as ongoing improvements to infrastructure and to the security of our water system.

Construction has continued on a significant water utility project at Water Station 5, located on 5.3 acres along the north side of East Mill Plain Boulevard and west of Devine Road next to Fire Station 3. Construction of one new seismically resilient reservoir is complete with construction commencing on a second seismically resilient reservoir, a new booster pump station, emergency power and security upgrades.

In addition, replacement of aging water pipes as well as the installation of new transmission mains continues throughout the Utility's service area, improving efficiency and reliability.

New state regulations for per- and polyfluoroalkyl substances (PFAS) require testing of water for five different PFAS starting in 2023. Through proactive testing in 2021, PFAS were found at low levels in Vancouver's water stations. March 2023 PFAS testing results for Vancouver's water are included in this Water Quality Report for your information.

Federal regulations require Vancouver to make its annual Water Quality Report available to all customers. This year's report is being provided to you electronically. To announce the availability of the electronic report, inserts are being included in bills to all customers within our Water Utility service area. Please take time to read about your water.



Water Station 1 project increased the security, reliability and performance of the city's water system.



Water Station 5 new reservoir construction.

## Water Quality Summary for 2022

The City of Vancouver reaches beyond state and federal requirements and has its water analyzed for more than 238 different substances, some regulated and some not regulated. The substances listed below are regulated and were detected in Vancouver's water during 2022. All samples taken are from treated water delivered to the distribution system. Chemical analysis of organics is measured in parts per billion (ppb). Analysis of inorganics is measured in parts per million (ppm). Highest measured values represent an exception to the overall average concentrations in water delivered in the system. All results are below levels allowed by federal and state agencies.

### Required Testing at Groundwater Sources

Contaminant (unit)	Highest Level Allowed (MCL)	Highest Level Detected	Lowest Level Detected	Ideal Goal (MCLG)	Potential Sources of Contaminant
Fluoride (ppm)	4.0	1.5	0.4	4.0	Erosion of natural deposits; additive for strong teeth
Nitrate (ppm)	10	4.0	ND	10	Fertilizer, animal waste, septic systems, sewage

### Required Testing Within the Distribution System

Contaminant (unit)	Highest Level Allowed (MCL)	Highest Level Detected	Lowest Level Detected	Ideal Goal (MCLG)	Potential Sources of Contaminant
Total Coliform Bacteria	Less than 5% positive/mo	0.7%	0%	0%	Naturally present in environment, contamination by mammals
Chlorine (ppm)	4.0	1.0	0.55	1.0	Additive for disinfectant residual

Contaminant (unit)	Highest Running Annual Average Allowed	Running Annual Average	(MCLG)	Range of Level Detected	Regulation Met?	Potential Sources of Contaminant
Total Trihalomethane (ppb)	80	10.6	N/A	0.5-12	Yes	Byproduct of disinfection
Haloacetic Acids (ppb)	60	ND	N/A	ND	Yes	Byproduct of disinfection

### Secondary (Aesthetic) Standards and Other Characteristics

Note: These are additional substances, tested at groundwater sources, that relate to aesthetic qualities and may be of interest to customers.

Contaminant (unit)	Highest Level Allowed (MCL)	Highest Level Detected	Lowest Level Detected	Ideal Goal (MCLG)	Potential Sources of Contaminant
Copper (ppb)	1000	51	ND	N/A	Naturally occurring
pH	6.5-8.5	8.1	7.3	N/A	Naturally occurring or treatment adjustment

## Additional Frequently Requested Information

The following results are not required by law, but are provided by the City of Vancouver Water Utility to keep you informed about your water.

Contaminant (unit)	Highest Level Detected	Lowest Level Detected
Alkalinity (ppm)	120	80
Calcium (ppm)	39.1	20.9
Hardness (ppm)	148	81
Magnesium (ppm)	13.4	6.9
Potassium (ppm)	4.8	2.4
Sodium* (ppm)	34.2**	6.7

*\*EPA guidance level for sodium in drinking water is 20 mg/L for those on diets with daily sodium restrictions*  
*\*\*Elevated sodium level is a pH adjustment byproduct of EPA-required corrosion control at Water Station 15*

## EPA Mandatory Safe Drinking Water Statements for All Community Water Systems

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 impacts 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. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).



Throughout the country, sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. The City of Vancouver relies 100% on groundwater. As water travels through aquifers, it dissolves naturally-occurring minerals and can pick up inorganic contaminants, which are naturally occurring, and organic contaminants, such as byproducts of industrial processes. To ensure safe tap water, EPA and Washington Board of Health regulate certain contaminants in public drinking water. Vancouver's water is tested for more substances than required. All results, shown in this report, meet or are better than required by EPA and Washington State Department of Health.

## Information About Lead and Copper in Water

EPA rules require all public drinking water systems to regularly test a sample of potentially high-risk homes for lead and copper at an inside tap. Vancouver’s Utility conducted lead and copper tests in July 2020, in keeping with federal Safe Drinking Water Act and Washington State Department of Health regulations. The Utility worked closely with residents to test water at the taps at a sampling of 54 homes most likely to be at risk, generally built between 1981 and 1989. All results showed lead and copper concentrations below EPA action levels that require additional treatment. The next round of lead and copper sampling will be completed in 2023. Visit [cityofvancouver.us/water](http://cityofvancouver.us/water) for details.

### More Information

Lead is not present in Vancouver Water Utility’s source water. In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water is sitting in pipes, the more dissolved metals, such as lead, it may contain. Exposure to lead can cause serious health effects in all age groups. Infants and children who drink water containing lead could have decreases in IQ and attention span and increases in learning and behavior problems. Lead exposure among pregnant women increases prenatal risks. Lead exposure among women who later become pregnant has similar risks if lead stored in the mother’s bones is released during pregnancy. Recent science suggests that adults who drink water containing lead have increased risks of heart disease, high blood pressure, kidney or nervous system problems. If you are concerned about lead in your water, you may wish to have your water tested. More information is available from EPA’s Safe Drinking Water Hotline at 1-800-426-4791 or at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

	MCLG	Action Level*	Results**	Levels Tested	Homes Above Action Level	Source
Lead (ppb)	0	15	1.7	ND – 6.2	0	Corrosion of home plumbing systems
Copper (ppb)	1.3	1.3	0.12	ND – 0.85	0	Natural deposits/Corrosion of home plumbing systems

Note: Table above shows results of 2020 testing

\*Concentration of contaminant which, if exceeded, triggers treatment or other requirements

\*\*Represents 90th Percentile, or 90 percent of the samples were less than the values shown

### Small steps can make a big difference! Here’s how you can reduce potential exposure to lead from plumbing:

- Only use fresh, cold tap water for drinking, cooking or preparing baby formula.
- Let the cold water tap run until the water is cold to flush out any potential lead from private plumbing.
- Do not use the hot water tap for drinking or cooking water as lead dissolves more easily in hot water. Boiling water will NOT reduce lead.
- Clean faucet aerators or screens frequently to remove the potential for particles.
- Be informed. Get the facts about your water. Learn more at [cityofvancouver.us/water](http://cityofvancouver.us/water).



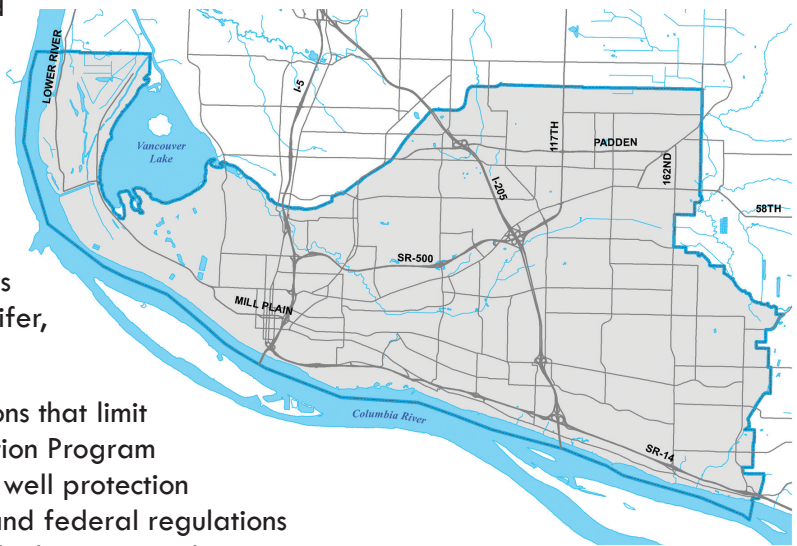
## Aquifers - Source of 100% of Vancouver's Water Supply

The City of Vancouver gets all of the water supplied throughout our service area from wells tapping three underground aquifers – Orchards, Troutdale and the Sand-and-Gravel aquifers.

An aquifer is an underground layer of unconsolidated rock or sand that is saturated with usable amounts of water. Aquifers, which store and carry water, form significant natural water supplies. Recharge areas are important to a healthy aquifer. In a recharge area, water is able to seep into the earth and down to the aquifer, helping recharge these vital natural resources.

To keep tap water safe, EPA prescribes regulations that limit contaminants. The City's Water Resources Protection Program actively inspects and assists businesses in special well protection areas. Together, the City, State of Washington, and federal regulations are working to keep our aquifers safe and our drinking water clean.

### Vancouver's Water Service Area



City of Vancouver PWS Water System ID 91200L

## Answers to Frequently Asked Questions

### Does my drinking water contain chlorine?

Yes. While Vancouver's high-quality water meets all federal and state standards, a trace amount of chlorine (not chloramine) residual has been added as a precaution against any potential contaminants, including viruses, that might somehow enter the system. To reduce chlorine taste, fill a pitcher with water and let it sit a bit. The chlorine will react with the air and evaporate from the water. Some customers prefer to use a filter. Keep in mind that your home plumbing can affect water taste, too.

### Does my drinking water contain fluoride?

Yes. Vancouver's water is fluoridated with sodium fluoride – not fluoride byproducts from other processes – to about 0.6-0.8 milligrams per liter in compliance with federal and state regulations and guidelines. Most water supplies contain some naturally occurring fluoride, and many communities add fluoride to drinking water to promote dental health. Fluoridation in the City of Vancouver dates back to a 1961 Council ordinance, backed by a citizens' referendum in early 1962. EPA's drinking water standard and maximum amount for fluoride is 4.0 mg/L. Washington State Board of Health's 2016 rule on fluoridation of drinking water incorporates the new single optimal fluoride level of 0.7 mg/L recommended by the U.S. Department of Health and Human Services, and reduces the current operating range to 0.5 to 0.9 mg/L. For more information, please visit the EPA website at [epa.gov/safewater](https://epa.gov/safewater). Information is also available from the Washington State Department of Health at [doh.wa.gov](https://doh.wa.gov) and the U.S. Department of Health and Human Services website at [cdc.gov/Fluoridation](https://cdc.gov/Fluoridation).

### What should I know when setting new appliances for water hardness?

Many new dishwashers and other appliances have settings that are determined by water hardness. In 2022 water testing, high and low hardness levels found in our water, as figured in grains per gallon (gpg), ranged from 4.7 to 8.6. Information about hardness is also listed in this report under other characteristics.

## Understanding PFAS

Vancouver, like many communities in Washington and across the nation, is addressing an emerging issue with per- and polyfluoroalkyl substances (PFAS). PFAS are a large group of human-made chemicals that have been used in industry and in consumer products worldwide since the 1940s.

### About PFAS and Vancouver’s Water

In 2020, the Water Utility completed proactive testing and found PFAS at low levels in some of the City’s groundwater wells. The Utility took action and hired water quality experts to investigate possible sources and the extent of PFAS in the water supply and started work to identify treatment options.

### New PFAS Testing

In 2023, the Water Utility began a new program of PFAS testing and reporting. Recent testing for PFAS showed three separate sample results that, while low, are slightly above the recommended limits in state guidance.

The Washington State Department of Health develops State Action Levels to protect the health of drinking water consumers from contaminants not yet federally regulated. The State Action Levels for PFAS are public health goals set to protect all people, including sensitive populations and life stages, from potential harmful effects of exposure to PFAS over a lifetime of drinking the water. If you have been drinking water over the State Action Level, it does not mean you will get sick or have health problems from this exposure.

### PFAS Sampling Results from March 2023

Type of PFAS	Vancouver Sampling Result Range	State Action Level	State Action Level Exceedance
Perfluorooctanoic acid (PFOA)	3.1-15 ppt	10 ppt	Water Station 14
Perfluorooctanesulfonic acid (PFOS)	5.4-22 ppt	15 ppt	Water Stations 4, 14 and 15
Perfluorononanoic acid (PFNA)	ND	9 ppt	—
Perfluorohexanesulfonic acid (PFHxS)	3.7-6.9 ppt	65 ppt	—
Perfluorobutanesulfonic acid (PFBS)	4.0-8.1 ppt	345 ppt	—
Perfluoroheptanoic acid (PFHpA)	2.6-3.3 ppt	—	—
Perfluorohexanoic acid (PFHxA)	2.4-5.8 ppt	—	—

Note: ND = non detect; ppt = parts per trillion (1 ppt is equivalent to a single drop of water in 20 Olympic-sized swimming pools)

## City Actions to Protect Water Quality

- **Testing the water supply:** Operations staff continue to test and monitor water quality in compliance with state and federal requirements to ensure a safe water supply.
- **Evaluating treatment options:** Water quality engineers are evaluating cost-effective treatment options to remove PFAS from the water.
- **Finding long-term solutions:** Expert scientists are investigating potential sources of PFAS and the extent of PFAS in the local groundwater supply.
- **Planning for the future:** Future costs for PFAS treatment are included in the City’s long-range capital plan.
- **Reducing costs:** The Utility is pursuing federal and state grants and loans to reduce the impact to ratepayers.
- **Sharing information:** Up-to-date information on PFAS and test results are being shared with all customers and the public so you can make informed decisions.



## More Information About PFAS

PFAS are present in many everyday household materials including non-stick cookware, food packaging, clothing, and furniture. These chemicals can enter the environment and water supplies from multiple sources and do not break down easily, which is why they are sometimes called “forever chemicals.”



## Potential Health Impacts

Scientists and public agencies are still studying how PFAS affect people’s health and health advice is updated as new science becomes available.

- **PFOA:** Some people who drink water containing PFOA in excess of the State Action Level over many years may experience problems with their cholesterol, liver, thyroid or immune system; have high blood pressure during pregnancy; have babies with lower birthweights; and be at higher risk of getting certain types of cancers.
- **PFOS:** Some people who drink water containing PFOS in excess of the State Action Level over many years may experience problems with their cholesterol, liver, thyroid, kidney or immune systems; or have children with lower birthweights.

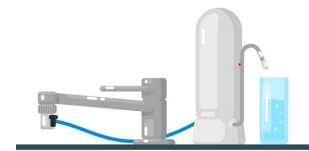
## Ways to Reduce Exposure

The Washington State Department of Health recommends the following:

- Learn about PFAS and steps you can take to reduce your exposure at [epa.gov/pfas/meaningful-and-achievable-steps-you-can-take-reduce-your-risk](https://epa.gov/pfas/meaningful-and-achievable-steps-you-can-take-reduce-your-risk) or [doh.wa.gov/pfas](https://doh.wa.gov/pfas).
- If you are pregnant, breastfeeding or mixing infant formula with tap water, use an alternative source for drinking or mixing infant formula or install home water treatment that is certified to lower the levels of PFAS in your water.
- Boiling your water will not reduce PFAS levels.
- If you are concerned about potential health effects from exposure to PFAS, please contact your doctor or health care professional.



Under the Sink Filter



Countertop Filter

We are committed to keeping the community informed as we learn more about treatment options and receive updates from federal and state authorities. To learn more about the Utility’s response to PFAS, please visit [cityofvancouver.us/PFAS](https://cityofvancouver.us/PFAS) or call Utility Customer Service representatives at 360-487-7999.



## Find and Fix Leaks Fast!

Water is a precious resource. Yet, too often leaks go unchecked, resulting in lost water and higher bills. Here’s how to find leaks: Start with your water meter. Make sure no water is being used in or outside your home. Then check the meter’s flow indicator, typically shown as a star, triangle or sweeping hand. If the flow indicator is spinning, you likely have a leak.

Outside, look for unusual vegetation growth or moist areas in the lawn or landscaping. Inside, check toilets for leaks by putting a few drops of food color or a dye tablet into the upper water tanks. Wait 30 minutes and do not use or flush. If color appears in the bowl, there is a leak.

If needed, contact a licensed plumber for help with fixing leaks in your home plumbing.

**Questions?** Please call 360-487-7999 to speak with a Utility customer service representative.

## Annual Checkup Required: Backflow and Cross Connection Prevention

If you are a property owner with an in-ground sprinkler irrigation system or have a private well on your property, state and local laws require you to maintain backflow prevention assemblies on your water service. You are also required to have these assemblies inspected and tested annually by a Washington State certified backflow assembly tester. Results of your annual inspection must be reported to the City of Vancouver Water Quality Division.



Backflow occurs when water flows in the opposite direction than intended, which could allow contaminants to enter your residence's water plumbing system and/or the public drinking water system. Backflow prevention assemblies,

when inspected and tested annually, help to ensure contaminants don't enter our drinking water system, keeping your drinking water safe and protecting your community.

Need to schedule an inspection? For a complete list of backflow assembly testers visit: [cityofvancouver.us/backflow](https://cityofvancouver.us/backflow). E-mail test results to [backflowtestreports@cityofvancouver.us](mailto:backflowtestreports@cityofvancouver.us).

### Questions?

Visit: [cityofvancouver.us/backflow](https://cityofvancouver.us/backflow), email [backflowtestreports@cityofvancouver.us](mailto:backflowtestreports@cityofvancouver.us) or call 360-487-8276.

## H2O: Helping Neighbors in Need

A little help can go a long way for those in our community who need it most. Help to Others, or H2O, is a City of Vancouver Utility program designed to help qualifying low-income residents in crisis situations pay for vital water and/or sewer utility services. The program is supported by donations from caring residents and businesses in our community. Donations are tax deductible under applicable IRS regulations.

Every dollar donated to the H2O program goes directly to helping people in our community. No matter how small or how big, your contribution to H2O can make a difference. Please consider making a donation in 2023. To learn how to make a one-time or recurring H2O donation by check or credit card, please call 360-487-7999 or visit [cityofvancouver.us/AtYourService](https://cityofvancouver.us/AtYourService).





## Switch to eBilling Today!

Less Paper. More Trees.



Sign up today to get your City of Vancouver Utility bill by email. Visit [cityofvancouver.us/AtYourService](https://cityofvancouver.us/AtYourService), sign into your account, click on the eBilling option follow all steps. Be sure to confirm your email address to complete the process.

**Tree Bonus!** When you switch from paper to electronic bills, you may qualify for up to \$100 back on the cost of a newly planted tree through the Urban Forestry TreeFund. You'll reduce mailbox clutter, get your bill securely, and help make your neighborhood and Vancouver a little more green. For more about our TreeFund Program, please visit [cityofvancouver.us/Treefund](https://cityofvancouver.us/Treefund).

Want to take more work out of bill paying? Enroll in AutoPay, a free service that lets City of Vancouver customers pay water, sewer and stormwater utility bills automatically using a banking or credit card account. Visit [cityofvancouver.us/AtYourService](https://cityofvancouver.us/AtYourService).

## Reduce Moving Stress. Start, Stop or Transfer Water Service Online

Residents who are moving within the City of Vancouver's Water Utility service area and need to start or stop service can do so online. Visit [cityofvancouver.us/AtYourService](https://cityofvancouver.us/AtYourService) and click on Start or Stop service forms, as needed. Please note: Forms must be submitted a minimum of 2 business days prior to start date.

**Need help?** To speak with a customer service representative, please call 360-487-7999 during regular Utility Services office hours, 8 a.m. to 5 p.m., Monday, Tuesday, Thursday and Friday, and 9 a.m. to 5 p.m. Wednesday. Please note that the office is closed to phone calls from noon to 1 p.m. each day.

## Terms and Definitions in This Report:

**AL:** Action Level. Concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow. **EPA:** United States Environmental Protection Agency, which enforces the Safe Drinking Water Act. **WSDOH:** Washington State Department of Health, which enforces the Safe Drinking Water Act within the State of Washington. **<:** Less than. **MCL:** Maximum Contaminant Level. Highest level of a contaminant allowed in drinking water. MCLs are set as close to ideal levels as current treatment technology allows.

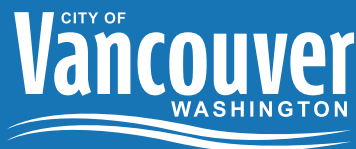
**ppb:** Parts per billion. One ppb = one milligram per 1000 liters. **ppm:** Parts per million. One ppm = one milligram per liter. **mg/L:** One milligram per liter. See ppm. **ND:** Non Detect. **THM:** Trihalomethanes. Total concentration of a series of chlorinated organic compounds, disinfection byproducts that are unavoidable and caused by a chemical reaction between chlorine and naturally occurring organic matter in water. **MCLG:** Maximum Contaminant Level Goal. Level of contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety. Only Primary Standards have MCLGs because Secondary Standards are not set for health reasons. **pCi/L:** picocuries per liter. Unit of measurement for radionuclides. **Hardness:** To convert ppm to grains per gallon, divide by 17.12. **SAL:** State Action Level. A level that is set to protect human health and is based on the best available science at the time.

## Learn More

- Vancouver Water Quality/Operations: [cityofvancouver.us/water](https://cityofvancouver.us/water) or 360-487-8177
- Vancouver Utility Customer Service (bills/service): [cityofvancouver.us/AtYourService](https://cityofvancouver.us/AtYourService) or 360-487-7999
- Vancouver Backflow and Cross Connection Prevention: [cityofvancouver.us/backflow](https://cityofvancouver.us/backflow) or 360-487-8276
- Vancouver Water Resources Education Center: [cityofvancouver.us/watercenter](https://cityofvancouver.us/watercenter) or 360-487-7111
- Vancouver Water Resources Protection Program: [cityofvancouver.us/waterprotection](https://cityofvancouver.us/waterprotection) or 360-487-7130
- EPA Safe Drinking Water: [epa.gov/safewater](https://epa.gov/safewater) or 800-426-4791

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- All City of Vancouver Social Media: [cityofvancouver.us/socialmedia](https://cityofvancouver.us/socialmedia)



## 2022 Annual Water Quality Report

[cityofvancouver.us/water](https://cityofvancouver.us/water)