



BLUE ROCK
Water Co.

2020 DRINKING WATER QUALITY REPORT

Fragaria Landing Water System (PWS# 26651 1)

WHAT IS THIS REPORT?

The Environmental Protection Agency requires public water suppliers that serve the same people year-round (community water systems) to provide consumer confidence reports to their customers. These reports are also known as annual water quality reports.

This report summarizes information regarding water sources used, any detected contaminants, compliance, and educational information.

Blue Rock Water Company is pleased to report that your drinking water complies with federal and state drinking water quality standards. This report summarizes the company's 2020 water quality testing program. We regret to report that our Fragaria Landing water system had one violation of a maximum contaminant level last year.

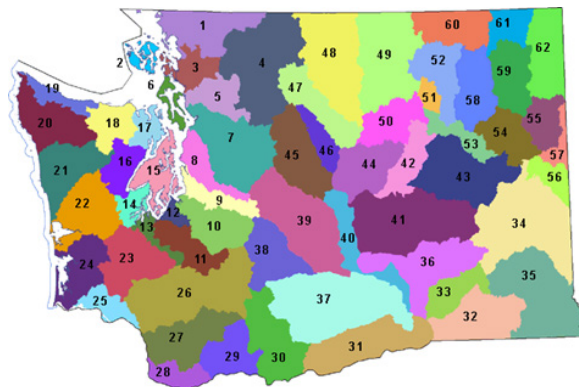
Where does your water come from?

Blue Rock Water company's drinking water comes from springs and groundwater as well as some intertie water supplies. Most of Blue

Rock Water Company's supply is groundwater that originates throughout Washington state watersheds.

Our water sources

Blue Rock Water Company's water sources are from the following water resource areas



Cedar-Sammamish, Elwha-Dungeness, Island, Kitsap, Lower Lake Roosevelt, Nisqually, Quilcene-Snow, Snohomish, and Stillaguamish.

The distribution system

Gravity and pumps feed our drinking to a system of water tanks before continuing to your home. Miles of pipe carries water to Blue Rock Water customers. Blue Rock's Alder Lake, Lowper, Marbello, Marysville, Northwest, Parkwood, Sunwood Graham, Suddenview, and Skyview systems all have added chlorine as a disinfectant to make sure the water is free from harmful microorganisms. Blue Rock monitors chlorine levels for proper dosages.

| Water Resource Area | Description | Group A Water Systems |
|---------------------|----------------------|--|
| WRIA 8 | Cedar-Sammamish | Vashon (Group B) |
| WRIA 18 | Elwha-Dungeness | Lowper (Group B) |
| WRIA 6 | Island | Parkwood |
| WRIA 15 | Kitsap | 85 Acres, Cliftonwood, Fragaria Landing, Hunt I&II, Hunt III and Stavis I |
| WRIA 53 | Lower Lake Roosevelt | Sunnyhills |
| WRIA 11 | Nisqually | Alder Lake, Sunwood Graham |
| WRIA 17 | Quilcene-Snow | Tala Point |
| WRIA 7 | Snohomish | Cascade Crest, Cherry Creek, Marbello, Marysville, Northwest, Skyview, Suddenview & Vista Glen |
| WRIA 5 | Stillaguamish | Stilliridge |

SOURCES OF DRINKING WATER



Sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from human activity and the presence of animals. Contaminants may include the following:

Microbial contaminants

Viruses, bacteria and other microbes that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants

Salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides

Chemical substances resulting from a variety of sources, such as agricultural and urban stormwater runoff, and residential uses.

Organic chemical contaminants Substances including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, that may come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants

Substances that can be naturally occurring or be the result of oil and gas production, and mining activities.

WHAT'S IN YOUR DRINKING WATER AND WHAT IS NOT

The Washington Department of Health gives all surface water a susceptibility rating of "high" regardless of whether there are any sources of contaminants in the watershed. Information on the source water assessments is available at for-ress.wa.gov/doh/swap.

Contaminants and Regulations

The Environmental Protection Agency and the Washington State Board of Health develop regulations that limit the amount of certain contaminants in water provided by public water systems to ensure that the tap water is safe to drink.

Your Health

Drinking water, including bottled water, may contain small amounts of some contaminants. The presence of contaminants does indicate that the water poses a health risk. Consumers can obtain more information about contaminants and potential health effects by contacting the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or by visiting epa.gov/ground-water-and-drinking-water.

Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people 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. Environmental Protection Agency/Centers for Disease Control 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) or by visiting epa.gov/ground-water-and-drinking-water.

ABOUT LEAD AND COPPER

If present, elevated levels of lead and copper can cause health problems, especially for pregnant women and children. There are no detectable levels of lead in our water.

Sources of Lead

Although there is no detectable lead in our source water, sometimes there are elevated levels of lead and copper in some home tap samples because of the corrosion of household plumbing systems. In Washington State, lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Learn more about water quality and lead in drinking water at <https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Lead>



Learn About Your Plumbing

Blue Rock Water Company is responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. Consumers need to be aware of their plumbing and how it can affect your drinking water quality. Where you live, when your plumbing was installed, and what type of plumbing you have can impact your potential exposure to lead and copper.

Information about lead in drinking water, testing, and steps you can take to minimize exposure is available at the Safe Drinking Water Hotline (800-426-4791) or by visiting epa.gov/ground-water-and-drinking-water.

HOW TO MINIMIZE YOUR EXPOSURE TO LEAD

Flush

If water has not been used in the home for a few hours, such as first thing in the morning or when getting home from work, run the kitchen or any bathroom faucet for five minutes. You also can run the dishwasher, take a shower, or do a load of laundry to help flush water in your home's plumbing before drinking or cooking. Use only cold water for drinking, cooking, and making infant formula. Boiling the water does not remove lead.



Filter

Use filtered water for drinking (including making tea and coffee), cooking (particularly when making foods like rice, beans, and soup) and preparing infant formula. Be sure the filter is NSF certified to remove lead. Visit nsf.org for filter options.



Maintain

Regularly clean your faucet's screen, also known as an aerator. You can find an instructional video at denverwater.org/Lead. Replace filters at the manufacturer's recommended schedule.



ABOUT MANGANESE

Manganese occurs naturally in both surface and ground waters that encounter manganese-bearing soils. Like iron, manganese is considered a secondary contaminant based on **aesthetic effects such as taste or staining**. Even at low levels, manganese can be a nuisance. Therefore, the state of Washington

Department of Health's limit for manganese is 0.05 mg/l because of aesthetic reasons.



CROSS-CONNECTIONS

A cross-connection is any actual or potential physical connection between a public water system or the consumer's water system and any source of non-potable liquid, solid, or gas that could contaminate the potable water supply by backflow. Cross-connections exist in all plumbing systems. There are numerous well-documented cases where drinking water has been contaminated via unprotected cross-connections. These cases have caused illness, injury, and in some cases, death to consumers served by the system.

In December 1970, wine back flowed into the public water system in Cincinnati, Ohio. At a winery in the City, someone inadvertently left open a water valve to a wine distilling tank after flushing out the tank. During a subsequent fermenting process, wine back flowed from the tank into the city water mains and out of the faucets of nearby homeowners. This reversal of flow through the water piping occurred because the pressure in the wine distilling tank was greater than the pressure in the City water system.

The task of eliminating all cross-connections is enormous, but Blue Rock Water Company partners with its customers to protect the safety and quality of the water supply. To learn more about cross-connection and steps to safeguard your drinking water at the Department of Health's cross-connection website.

DEFINITIONS USED IN THE REPORT

How Do I Read This Report?

The **Maximum Allowable** column provides you with the maximum level established by the Environmental Protection Agency (EPA) or the Department of Health (DOH). These are standards that all drinking water suppliers serving over 15 customers must meet.

The **Minimum/Maximum Range** and **Average Value** show you the contaminant level detected in the water analysis test.

The **last column** tells you whether or not the **test complies** with regulations. A "YES" indicates that the range detected is within EPA regulations.

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

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

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

Mg/L (milligrams per liter): number of milligrams of a substance in one liter of 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 (e.g., chlorine, chloramines, chlorine dioxide) 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 contaminants.

N/A: Not applicable. The EPA has not set MCLGs for these substances or the tests were not required this year.

N/D: Not detected.

ppm (parts per million): parts per million, or milligrams per liter.

pCi/l (parts per billion): One pico-curie per liter of air. One trillionth of a curie. Unit of radioactivity corresponding to 3.7×10^{10} disintegrations per second.

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect the aesthetic qualities of drinking water and are not health-based.

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

Turbidity: Has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms that include bacteria, viruses, and parasites. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

FRAGARIA LANDING WATER SYSTEM (26651 1 KITSAP COUNTY)

| Substance | Major Source | Units | Maximum Goal (MCLG) | Maximum Allowable (MCL) | Test Year | Average Value | Low | High | Comply |
|---|--|------------------|---------------------|-------------------------|-----------|---------------|--------|--------|-----------------------|
| Microbiological contaminants | | | | | | | | | |
| Total Coliform Bacteria | Naturally present in the environment | Present / Absent | 0 | >5% of monthly samples | 2020 | A | A | P | Yes - 11 of 12 months |
| Radioactive contaminants | | | | | | | | | |
| Gross Alpha ¹ | Erosion of natural deposits | pCi/l | 0 | 15.000 | | | | | |
| Radium 228 ¹ | Erosion of natural deposits | pCi/l | 0 | 5.000 | | | | | |
| 1 US Environmental Protection Agency (USEPA) regulations require monitoring for the presence of radioactive contaminants every six years. The next round of required sampling will be conducted in 2021. | | | | | | | | | |
| Inorganic contaminants (IOC) | | | | | | | | | |
| Arsenic ⁶ | Erosion of natural deposits | mg/L | N/A | 0.0104 | | | | | |
| Copper ² | Corrosion of household plumbing: erosion of natural deposits; Leaching from wood preservatives | ppm | 1.3000 | 1.3000 | 2019 | 0.0440 | 0.0050 | 0.0800 | Yes |
| Lead ² | Corrosion of household plumbing: erosion of natural deposits | ppm | 0.0000 | 15.000 | 2019 | 0.001 | 0.001 | 0.001 | Yes |
| Nitrate | Runoff from fertilizer use; Leaching from septic tanks; sewage; erosion of natural deposits. | ppm | 10.000 | 10.000 | 2020 | 0.2400 | 0.2400 | 0.2400 | Yes |
| Manganese ⁴ | Erosion of natural deposits | ppm | N/A | 0.05 (SMCL) | | | | | |
| Iron ⁵ | Erosion of natural deposits | ppm | N/A | 0.3 (SMCL) | 2019 | 0.5100 | 0.5100 | 0.5100 | Yes |
| Complete IOC ³ | | ppm | | | | | | | |
| 2 US Environmental Protection Agency (USEPA) regulations require monitoring for the presence of lead and copper at household taps every three years. The next round of required sampling will be conducted in 2022. | | | | | | | | | |
| 3 The Utility is required to test for Complete IOC every nine years. The next round of required sampling will be conducted 2025. | | | | | | | | | |
| 4 The Utility is NOT required to test for Manganese every three years. | | | | | | | | | |
| 5 The Utility is required to test for Iron every three years. The next round of required sampling will be conducted in 2022. | | | | | | | | | |
| 6 The Utility is NOT required to test for Arsenic every three years. | | | | | | | | | |
| ICR disinfection by-products ⁷ | | | | | | | | | |
| TTHM (Total trihalomethanes) | By-product of drinking chlorination | ug/L | N/A | 80.4000 | | | | | |
| Haloacetic Acids (HAA5) | By-product of drinking chlorination | ug/L | N/A | 60.4000 | | | | | |
| 7 The Utility is NOT required to test for ICR disinfection for chlorinated water supplies every three years. | | | | | | | | | |
| Volatile organic contaminants (VOC) ⁸ | | | | | | | | | |
| 1,1 - DICHLOROETHYLENE | Discharge from industrial chemical factories | ug/L | 7.0000 | 7.0000 | | | | | |
| 1,1,1 - TRICHLOROETHANE | Discharge from metal degreasing sites and other factories | ug/L | 200.000 | 200.000 | | | | | |
| 1,1,2 - TRICHLOROETHANE | Discharge from industrial chemical factories | ug/L | - | 5.0000 | | | | | |
| 1,2 - DICHLOROETHANE | Discharge from industrial chemical factories | ug/L | - | 5.0000 | | | | | |
| 1,2 - DICHLOROPROPANE | Discharge from industrial chemical factories | ug/L | - | 5.0000 | | | | | |

FRAGARIA LANDING WATER SYSTEM (26651 1 KITSAP COUNTY)

| Substance | Major Source | Units | Maximum Goal (MCLG) | Maximum Allowable (MCL) | Test Year | Average Value | Low | High | Comply |
|--|---|-------|---------------------|-------------------------|-----------|---------------|-----|------|--------|
| Volatile organic contaminants (VOC) ⁸ | | | | | | | | | |
| 1,2,4, - TRICHLOROBENZENE | Discharge from textile finishing factories | ug/L | 7.0000 | 7.0000 | | | | | |
| BENZENE | Discharge from industrial chemical factories | ug/L | | 5.0000 | | | | | |
| CARBON TETRACHLORIDE | Discharge from chemical plants and other industrial activities | ug/L | - | 5.0000 | | | | | |
| CHLOROBENZENE | Discharge from chemical and agricultural chemical factories | ug/L | 100.000 | 100.000 | | | | | |
| CIS - 1,2 - DICHLOROETHYLENE | Discharge from industrial chemical factories | ug/L | 70.000 | 70.000 | | | | | |
| ETHYLBENZENE | Discharge from petroleum refineries | ug/L | 70.000 | 70.000 | | | | | |
| O - DICHLOROBENZENE | Discharge from industrial chemical factories | ug/L | 60.000 | 60.000 | | | | | |
| P - DICHLOROBENZENE | Discharge from industrial chemical factories | ug/L | 75.000 | 75.000 | | | | | |
| STYRENE | Discharge from rubber and plastic factories; leaching from landfills | ug/L | 100.000 | 100.000 | | | | | |
| T - 1,2 - DICHLOROETHYLENE | Discharge from industrial chemical factories | ug/L | 100.000 | 100.000 | | | | | |
| TETRACHLOROETHYLENE | Discharge from factories and dry cleaners | ug/L | - | 5.000 | | | | | |
| TOLUENE | Discharge from petroleum factories | ug/L | 1000.000 | 1000.00 | | | | | |
| VINYL CHLORIDE | Leaching from PVC pipes; discharge from plastic factories | ug/L | - | 2.0000 | | | | | |
| 8 The Utility is required to test for VOCs every six years. The next round of required sampling will be conducted in 2022. | | | | | | | | | |
| Synthetic organic contaminants including pesticides and herbicides (SOC) ⁹ | | | | | | | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards | mg/L | 2.0000 | 2.0000 | | | | | |
| 2,4 - D | Runoff from herbicide used on row crops | ug/L | 70.000 | 70.000 | | | | | |
| 2,4,5 - TP (SILVEX) | Residue of banned herbicide | ug/L | 50.000 | 50.000 | | | | | |
| ALACHLOR | Runoff from herbicide used on row crops | ug/L | 200.00 | 200.00 | | | | | |
| ATRAZINE | Runoff/leaching from pesticide use | ug/L | 3.000 | 3.000 | | | | | |
| BENZO(A)PYRENE | Leaching from linings of water storage tanks and distribution lines | ug/L | 0.2000 | 0.2000 | | | | | |
| DALAPON | Runoff from herbicide used on rights of way | ug/L | 200.000 | 200.000 | | | | | |
| DI(ETHYLHEXYL)-ADIPATE | Discharge from chemical factories | ug/L | 400.000 | 400.000 | | | | | |
| DI(ETHYLHEXYL)-PHthalate | Discharge from rubber and chemical factories | ug/L | 6.0000 | 6.0000 | | | | | |
| DINOSEB | Runoff from herbicide used on soybeans and vegetables | ug/L | 7.0000 | 7.0000 | | | | | |
| ENDRIN | Residue of banned insecticide | ug/L | 2.0000 | 2.0000 | | | | | |
| HEPTACHLOR | Residue of banned termiticide | ug/L | 0.4000 | 0.4000 | | | | | |

FRAGARIA LANDING WATER SYSTEM (26651 1 KITSAP COUNTY)

| Substance | Major Source | Units | Maximum Goal (MCLG) | Maximum Allowable (MCL) | Test Year | Average Value | Low | High | Comply |
|---|---|-------|---------------------|-------------------------|-----------|---------------|-----|------|--------|
| Synthetic organic contaminants including pesticides and herbicides (SOC) ⁹ | | | | | | | | | |
| HEPTACHLOR EPOXIDE | Breakdown of heptachlor | ug/L | 0.2000 | 0.2000 | | | | | |
| HEXACHLOROBENZENE | Discharge from metal refineries and agricultural chemical factories | ug/L | 0.1000 | 0.1000 | | | | | |
| HEXACHLOROCYCLO-PENTADIENE | Discharge from chemical factories | ug/L | 5.000 | 5.000 | | | | | |
| LINDANE (BHC - GAMMA) | Runoff/leaching from insecticide used on cattle, lumber, gardens | ug/L | 0.2000 | 0.2000 | | | | | |
| METHOXYCHLOR | from insecticide used on fruits, vegetables, alfalfa, livestock | ug/L | 4.000 | 4.000 | | | | | |
| PCBS (Total Aroclors) | Runoff from landfills; discharge of waste chemicals | ug/L | 0.5000 | 0.5000 | | | | | |
| PENTACHLOROPHENOL | Discharge from wood preserving factories | ug/L | 1.0000 | 1.0000 | | | | | |
| PICLORAM | Herbicide runoff | ug/L | 500.000 | 500.000 | | | | | |
| SIMAZINE | Herbicide runoff | ug/L | 4.000 | 4.000 | | | | | |
| TOXAPHENE | Runoff/leaching from insecticide used on cotton and cattle | ug/L | 3.000 | 3.000 | | | | | |
| TRICHLOROETHYLENE | Discharge from metal degreasing sites and other factories | ug/L | 5.000 | 5.000 | | | | | |
| 9 The Utility is required to test for SOC and Herbicides every nine years. The next round of required sampling will be conducted in 2026. | | | | | | | | | |

| TT or MCL Violation | Explanation | Length | Step Taken to Correct the Violation | Health Effects Language |
|---------------------|---|---------|---|--|
| Total Coliform | The water company received a coliform present test in July 2020 . | 10 days | The company retested the water on July 30 and received a passing result. Water was treated. | Coliform bacteria are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. The Utility collects one routine coliform sample every month. One unsatisfactory results was detected in 2020. |
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*For more information on water
quality visit bluerockmgt.com*