Supplemental Water Quality Data: August 2026

About Portland's water

Portland's primary water source is surface water from the Bull Run Watershed. Portland's secondary water source, groundwater from the Columbia South Shore Well Field, is used to supplement the Bull Run supply in the summer and fall, and to temporarily replace the Bull Run supply during turbidity events, maintenance activities, and emergencies. More information is available on our About Portland's Water System page.

We want your feedback!

Let us know if this report is meeting your data and information needs.

Please take a few minutes to fill out our survey.

From August 4–21, 2026, groundwater was added to the Bull Run supply during the annual maintenance run. Due to system operations, the groundwater contribution to the system varied daily, ranging between zero and about 35 percent of the total daily water demand. Details on groundwater operations and dates when groundwater has been used in the past are listed on our Groundwater Use page.

Bull Run water treatment is a three-step process:

1. **Chlorine (Cl_2)** disinfects against microorganisms that could otherwise make people sick. For treated water entering the distribution system, the chlorine target varies seasonally, ranging between 2.2–2.5 parts per million (ppm).
2. **Ammonia (NH_3)** stabilizes chlorine to form a longer-lasting chloramine disinfectant. Total ammonia averages about 0.5 ppm and free ammonia about 0.02 ppm as N.
3. **Soda ash (Na_2CO_3) and carbon dioxide (CO_2)** reduce corrosion of metals in pipes and plumbing by increasing the total alkalinity and pH. For treated water entering the distribution system, the pH target is 8.8–9.0 and the total alkalinity (as $CaCO_3$) target is 28–30 ppm.

Groundwater is also treated with chlorine and ammonia, but sodium hydroxide (NaOH) is added for pH adjustment as needed. For finished groundwater entering the distribution system, the pH target is 8.2.

The Portland Water Bureau is currently constructing a new filtration facility for the Bull Run water supply. Find out more on our Bull Run Filtration Project page.

About this report

The Portland Water Bureau releases drinking water test results three times per year for users who need water quality data beyond what is provided in our annual water quality report. Data in this report include the most recent test results from both the Bull Run and groundwater sources.

Bull Run data include results from samples collected on August 10, 2026 as well as the range for the past year (September 1, 2025, through August 31, 2026). We collect Bull Run samples for this report three times per year, typically in April, August, and November, sampling water as it is entering the distribution system.

Groundwater data include results from samples collected on August 5, 2026 as well as the range for the past 3 years (September 1, 2023, through August 31, 2026)**.** We collect groundwater samples for this report at least once per year, typically in July or August, sampling water as it is entering the distribution system. More sampling can occur if there are additional groundwater runs during the year.

Additional information

- **List of definitions and abbreviations:** find on page 6
- **Report archive and additional test results:** Drinking Water Test Results page
- **Questions about water quality or this report?** Contact 503-823-7525 or WBWaterLine@portlandoregon.gov
- **Sign up for water quality updates by email or text:** Sign up to get notices when we:
  - Turn groundwater on or off
  - Make seasonal adjustments to treatment target levels
  - Release new supplemental water quality data or annual reports

The City of Portland is committed to providing meaningful access. To request translation, interpretation, modifications, accommodations, or other auxiliary aids or services, or to file a complaint of discrimination, contact **503-823-4000 (311), Relay: 711, or 503-823-7770**.

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Data for treated Bull Run water

Physical characteristics

Physical characteristics include temperature, pH, specific conductance, hardness, color, turbidity, and solids. For turbidity, regulatory data from the raw water intake are available in the Annual Water Quality report.

Physical characteristics	8/10/26 results	12-month range	Standard limit	Standard type	Units
Color	6	6–9	15	Secondary	Color units
Hardness (as $CaCO_3$)	8.6	6.6–11	250	Secondary (Oregon)	ppm
Hardness (in grains per gallon)	0.50	0.39–0.64	-	None in these units	Grains per US gallon (1 grain = 17.1 ppm)
pH, field	9.0	8.6–9.3	6.5–8.5	Secondary	Standard pH units
Specific conductance	66.1	62.2–71.6	-	None	µmhos/cm @25°C
Temperature	15.1	4.8–17.7	-	None	degrees Celsius
Total dissolved solids (TDS)	48	48–60	500	Secondary	ppm
Total suspended solids (TSS)	<0.5	<0.5–0.6	-	None	ppm
Total solids (TS @180°C)	50	50–57	-	None	ppm
Turbidity	0.4–0.5	0.2–2.9	None at this location	Primary (at raw water intake)	Nephelometric turbidity units (NTU)

Nutrients

Nutrients are naturally occurring organic and inorganic substances that microorganisms and plants need to grow.

Nutrients (chemical compound)	8/10/26 results	12-month range	Standard limit	Standard type	Units
Ammonia nitrogen, free (NH_3 as N)	0.03	0.01–0.14	-	None	ppm
Ammonia nitrogen, total (NH_3 as N)	0.52	0.39–0.57	-	None	ppm
Nitrate nitrogen (NO_3^- as N)	0.011	<0.010–0.052	10	Primary	ppm
Nitrite nitrogen (NO_2^- as N)	<0.005	<0.005	1	Primary	ppm
Nitrogen, organic (N)	<0.05	<0.05	-	None	ppm
Nitrogen, total (N)	0.40	0.39–0.47	-	None	ppm
Phosphorus, reactive (PO_4^{3-} as P)	0.004	0.004	-	None	ppm
Phosphorus, total (P)	<0.01	<0.01	-	None	ppm
Silica (SiO_2 as Si)	4.7	3.8–5.4	-	None	ppm
Total organic carbon (TOC as C)	1.1	1.1–1.4	-	None	ppm

Anions and cations

Anions (negatively charged ions) and cations (positively charged ions) enter the water when it flows over or through soil and rocks, dissolving minerals into the water.

Anions and cations (chemical compound)	8/10/26 results	12-month range	Standard limit	Standard type	Units
Alkalinity, bicarbonate (HCO_3^- as $CaCO_3$)	26	26–29	-	None	ppm
Alkalinity, carbonate (CO_3^{2-} as $CaCO_3$)	1.9	0.3–1.9	-	None	ppm
Alkalinity, hydroxide (OH^- as $CaCO_3$)	0.4	<0.1–0.4	-	None	ppm
Alkalinity, total (as $CaCO_3$)	28	27–36	-	None	ppm
Calcium (Ca^{2+})	2.1	1.6–2.5	-	None	ppm
Carbon dioxide, free (CO_2)	<0.1	<0.1–0.6	-	None	ppm
Carbon dioxide, total (CO_2)	24	24–26	-	None	ppm
Chloride (Cl^-)	2.9	2.6–3.0	250	Secondary	ppm
Cyanide (CN^-)	Not tested	<0.010	0.2	Primary	ppm
Fluoride (F^-)	<0.025	<0.025	4.0/2.0	Primary/secondary	ppm
Magnesium (Mg^{2+})	0.85	0.63–1.10	-	None	ppm
Potassium (K^+)	0.23	0.18–0.28	-	None	ppm
Sodium (Na^+)	12	12	-	None	ppm
Sulfate (SO_4^{2-})	0.34	0.34–0.36	250	Secondary	ppm

Metals

Metals are a group of similar elements that occur naturally in the Earth's crust. The following results are total metals. For lead and copper, regulatory data from customer taps are available in the Annual Water Quality report.

NEW UNITS! Please check units carefully, some data in the following table are now provided in ppb instead of ppm (1 ppm = 1,000 ppb). New units are indicated in bold.

Metals (atomic symbol)	8/10/26 results	12-month range	Standard limit	Standard type	Units
Aluminum (Al)	15.5	15.5-52.5	50–200	Secondary	**ppb**
Antimony (Sb)	<0.50	<0.50	6	Primary	**ppb**
Arsenic (As)	<0.50	<0.50	10	Primary	**ppb**
Barium (Ba)	0.00108	0.00083–0.00121	2	Primary	ppm
Beryllium (Be)	<0.50	<0.50	4	Primary	**ppb**
Cadmium (Cd)	<0.50	<0.50	5	Primary	**ppb**
Chromium (Cr)	<0.50	<0.50	100	Primary	**ppb**
Copper (Cu)	<0.00050	<0.00050	None at this location	Primary (at customer taps)	ppm
Iron (Fe)	74.2	29.0–81.1	300	Secondary	**ppb**
Lead (Pb)	<0.05	<0.05	None at this location	Primary (at customer taps)	**ppb**
Manganese (Mn)	9.65	2.61–21.40	50	Secondary	**ppb**
Mercury (Hg)	<0.10	<0.10	2	Primary	**ppb**
Nickel (Ni)	<0.50	<0.50	-	None	**ppb**
Selenium (Se)	<2.5	<2.5	50	Primary	**ppb**
Silver (Ag)	<0.50	<0.50	100	Secondary	**ppb**
Thallium (Tl)	<0.50	<0.50	2	Primary	**ppb**
Vanadium (V)	Not tested	<0.50	-	None	**ppb**
Zinc (Zn)	<0.0020	<0.0020	5	Secondary	ppm

Volatile organic chemicals (VOCs)

VOCs include solvents, industrial and commercial products, and disinfection byproducts. Disinfection byproducts form when naturally occurring organic and inorganic materials in the water react with chlorine or other disinfectants.

Portland tests for 60 individual VOCs and of those, commonly detects only two at this sample location. These two VOCs are part of the trihalomethane disinfection byproduct group. For all disinfection byproducts, regulatory data from the distribution system are available in the Annual Water Quality report.

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Volatile organic chemicals	8/10/26 results	12-month range	Standard limit	Standard type	Units
Bromodichloromethane	1.07	0.62–1.30	None at this location	Primary (in distribution system)	**ppb**
Chloroform	15.3	9.12–24.4	None at this location	Primary (in distribution system)	**ppb**
58 additional VOCs	All <MRL	All <MRL	Depends on compound	Primary for 21 VOCs None for 37 VOCs	**ppb**

Data for treated groundwater

Physical characteristics

Physical characteristics include temperature, pH, specific conductance, hardness, color, turbidity, and solids.

Physical characteristics	8/5/26 results	3-year range	Standard limit	Standard type	Units
Color	5	<5–17	15	Secondary	Color units
Hardness (as $CaCO_3$)	67	50–82	250	Secondary (Oregon)	ppm
Hardness (in grains per gallon)	3.9	2.9–4.8	-	None in these units	Grains per US gallon (1 grain = 17.1 ppm)
pH, field	8.3	7.7–8.5	6.5–8.5	Secondary	Standard pH units
Specific conductance	162	150–220	-	None	µmhos/cm @25°C
Temperature	15.6	13.8–20.5	-	None	degrees Celsius
Total dissolved solids (TDS)	130	120–140	500	Secondary	ppm
Total suspended solids (TSS)	<0.5	<0.5–1.5	-	None	ppm
Total solids (TS @180°C)	130	130–150	-	None	ppm
Turbidity	0.35	<0.30–1.39	-	None at this location	Nephelometric turbidity units (NTU)

Nutrients

Nutrients are naturally occurring organic and inorganic substances that microorganisms and plants need to grow.

Nutrients (chemical compound)	8/5/26 results	3-year range	Standard limit	Standard type	Units
Ammonia nitrogen, Free (NH_3 as N)	0.02	<0.01–0.26	-	None	ppm
Ammonia nitrogen, Total (NH_3 as N)	0.48	0.47–0.56	-	None	ppm
Nitrate nitrogen (NO_3^- as N)	0.096	0.048–0.310	10	Primary	ppm
Nitrite nitrogen (NO_2^- as N)	<0.005	<0.005	1	Primary	ppm
Phosphorus, reactive (PO_4^{3-} as P)	0.10	0.10–0.12	-	None	ppm
Phosphorus, total (P)	0.10	0.09–0.12	-	None	ppm
Silica (SiO_2 as Si)	18.1	16.8–20.1	-	None	ppm
Total organic carbon (TOC as C)	<0.30	<0.30–0.62	-	None	ppm

Anions and cations

Anions (negatively charged ions) and cations (positively charged ions) enter the water when it flows over or through soil and rocks, dissolving minerals into the water.

Anions and cations (chemical compound)	8/5/26 results	3-year range	Standard limit	Standard type	Units
Alkalinity, bicarbonate (HCO_3^- as $CaCO_3$)	76	76–89	-	None	ppm
Alkalinity, carbonate (CO_3^{2-} as $CaCO_3$)	1.8	0.7–1.8	-	None	ppm
Alkalinity, hydroxide (OH^- as $CaCO_3$)	0.1	<0.1–0.1	-	None	ppm
Alkalinity, total (as $CaCO_3$)	78	78–105	-	None	ppm
Calcium (Ca^{2+})	16	15–18	-	None	ppm
Chloride (Cl^-)	3.0	2.9–4.0	250	Secondary	ppm
Cyanide (CN^-)	<0.010	<0.005-<0.010	0.2	Primary	ppm
Fluoride (F^-)	0.11	0.08–0.14	4.0/2.0	Primary/Secondary	ppm
Magnesium (Mg^{2+})	6.7	6.6–8.1	-	None	ppm
Potassium (K^+)	2.5	2.5–2.6	-	None	ppm
Sodium (Na^+)	10	10–12	-	None	ppm
Sulfate (SO_4^{2-})	4.4	3.8–6.4	250	Secondary	ppm

Metals

Metals are a group of similar elements that occur naturally in the earth's crust. The following results are total metals. For lead and copper, regulatory data from customer taps are available in the Annual Water Quality report.

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Metals (atomic symbol)	8/5/26 results	3-year range	Standard limit	Standard type	Units
Aluminum (Al)	6.5	2.2–8.9	50–200	Secondary	**ppb**
Antimony (Sb)	<0.50	<0.50	6	Primary	**ppb**
Arsenic (As)	0.91	0.62–1.10	10	Primary	**ppb**
Barium (Ba)	0.00919	0.00837–0.01180	2	Primary	ppm
Beryllium (Be)	<0.50	<0.50	4	Primary	**ppb**
Cadmium (Cd)	<0.50	<0.50	5	Primary	**ppb**
Chromium (Cr)	<0.50	<0.50	100	Primary	**ppb**
Copper (Cu)	<0.00050	<0.00050–0.00054	None at this location	Primary (at customer taps)	ppm
Iron (Fe)	30.5	5.6–67.0	300	Secondary	**ppb**
Lead (Pb)	<0.05	<0.05	None at this location	Primary (at customer taps)	**ppb**
Manganese (Mn)	27.3	7.1–43.8	50	Secondary	**ppb**
Mercury (Hg)	<0.10	<0.10	2	Primary	**ppb**
Nickel (Ni)	<0.50	<0.50	-	None	**ppb**
Selenium (Se)	<2.5	<2.5	50	Primary	**ppb**
Silver (Ag)	<0.50	<0.50	100	Secondary	**ppb**
Thallium (Tl)	<0.50	<0.50	2	Primary	**ppb**
Vanadium (V)	1.45	1.36–2.77	-	None	**ppb**
Zinc (Zn)	<0.0020	<0.0020	5	Secondary	ppm

Volatile organic chemicals (VOCs)

VOCs include solvents, industrial and commercial products, and disinfection byproducts. Disinfection byproducts form when naturally occurring organic and inorganic materials in the water react with chlorine or other disinfectants.

Portland tests for 60 individual VOCs and of those, commonly detects only two at this sample location. These two VOCs are part of the trihalomethane disinfection byproduct group. For all disinfection byproducts, regulatory data from the distribution system are available in the Annual Water Quality report.

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Volatile organic chemicals	8/5/26 results	3-year range	Standard limit	Standard type	Units
Bromodichloromethane	<0.50	<0.50	None at this location	Primary (in distribution system)	**ppb**
Chloroform	0.51	<0.50–0.68	None at this location	Primary (in distribution system)	**ppb**
58 additional VOCs	All <MRL	All <MRL	Depends on compound	Primary for 21 VOCS None for 37 VOCs	**ppb**

Notes

Drinking water standards

Regulatory standards (or limits) for substances in drinking water are set by the Environmental Protection Agency (EPA) and the Oregon Health Authority (OHA). Substances that have an established drinking water standard based on health risk or aesthetic characteristics are called regulated contaminants. Unregulated substances do not have a drinking water standard, but the EPA may consider setting a standard for them in the future.

Standards for drinking water used in the data tables:

- **Primary:** EPA sets primary standards for contaminants that have potential health effects. These standards are usually set as maximum contaminant levels (MCLs) intended to protect public health. Water systems are required to test for all substances with primary standards and report any detections in their annual water quality report. The EPA also specifies the required sampling location, which is the entry point to the distribution system for most substances. However, four substances in this report must be sampled at other locations:
    - Turbidity in Bull Run water must be sampled at the raw water intake and cannot exceed 5 NTU more than two times in 12 months. For groundwater, turbidity is not regulated and there are no sampling requirements.
    - Lead and copper must be sampled at customer taps. If 10 percent of tap samples are over 15 ppb for lead or 1.3 ppm for copper, Portland must take action.
    - Trihalomethane VOCs must be sampled in the distribution system. There are four trihalomethane compounds regulated as a group called Total Trihalomethanes (TTHM), which has a combined MCL of 80 ppb.
- **Secondary:** EPA sets secondary standards for contaminants that can have aesthetic impacts on water quality, including those that can affect water taste, odor, or color; stain sinks, bathtubs, or laundry; or interfere with treatment processes. At low concentrations, these contaminants are considered not harmful to health. These standards are set as secondary maximum contaminant levels (SMCLs). Water systems are not required to test for these substances but can use the SMCLs as guidance for aesthetic considerations.
- **None:** This is used for substances that do not have a regulatory standard for drinking water. Water systems are not required to test for these unregulated substances. Portland provides data for some of these substances in this report since their presence in water may impact some users.

Definitions and abbreviations used in data tables

Method reporting limit (MRL)

The lowest concentration of a substance that can be reliably reported for the test method. In the data tables, substances that had results below the MRL have a less than symbol (<) in front of the numerical MRL (e.g. <0.05). MRL is equivalent to limit of quantitation (LOQ).

Parts per million (ppm)

A small amount of a substance within the water. In terms of time, one part per million is about 32 seconds out of one year. Parts per million is equivalent to milligrams per liter (mg/L).

Parts per billion (ppb)

A very small amount of a substance within the water. In terms of time, one part per billion is about 3 seconds out of one hundred years. Parts per billion is equivalent to micrograms per liter (µg/L).