



# 2025 Annual Drinking Water Quality Report

Junction City Public Works

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2024 Outstanding Performer!

**We're very pleased to provide you with this year's Annual Water Quality Report. In 1996, Congress passed amendments to the Safe Water Drinking Act that require drinking water providers to give their customers important information about their water, including where it comes from, what is in the water, and how our water quality compares with federal standards. We want to keep you informed about the water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.**

*Where does our water come from?*

Junction City, like many small cities, relies on groundwater for its domestic water supply. The City operates six wells that contribute to our drinking water supply. These wells draw from a deep aquifer.

We have a source water protection plan available for public review at Public Works at 1171 Elm Street or the City's website.

The Drinking Water Protection Plan was developed in 1997, and provides information such as potential sources of contamination that could affect our water supply.

*What if I have questions about my water?*

This report describes our water quality, and explains what the various laboratory test results mean to our customers. If you have any questions about this report or concerning your water utility, please contact Gary Kaping, Public Works Director at 541-998-3125 (email: [gkaping@ci.junction-city.or.us](mailto:gkaping@ci.junction-city.or.us)). We want customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the second and fourth Tuesdays of each month, at 6:30 p.m. at City Hall, 680 Greenwood, Junction City.

*What contaminants might be in water?*

The City of Junction City routinely monitors for contaminants in your drinking water according to Federal and State laws. There were no detected constituents for the monitoring period of January 1 to December 31, 2025. The City monitors the drinking water at an annual cost of \$20,000. Please feel free to use the Oregon Health Divisions web site: <https://yourwater.oregon.gov/wssearch.php> to view our testing as well as any other water provider in the State. Our water provider ID No. is 4100418.

- ◆ Organic compounds, including synthetic and volatile organic chemicals, are by-products of gas stations, urban storm water run-off and septic systems.
- ◆ Inorganic compounds, such as salts and metals occur naturally or are caused by urban storm run-off, mining or farming.
- ◆ Herbicides and pesticides can come from a variety of sources such as agriculture, storm water run-off and residential uses. PCB's (polychlorinated biphenyl) are chemical compounds that can be found in environmental pollution.
- ◆ Radioactive material occurs naturally or can result from oil and gas production and mining activities.

Trained City personnel check the chlorine residual levels at several locations throughout the distribution system 365 days a year. By conducting these tests we are able to determine the need to increase or decrease the level of chlorine as necessary to maintain water quality. In addition, samples are collected once a week and analyzed by an independent laboratory for Total Coliform and E.coli Bacteria.

*How can water become contaminated?*

All sources of drinking water are subject to potential contamination by substances that are natural or man made. These substances can be microbes, inorganic and organic chemicals, and radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

*The City of Junction City works around the clock to provide top quality water to every tap. The water system is monitored seven days a week, 365 days per year. Our Utility Crew employees are required to achieve Water Treatment I and Water Distribution II certifications through the Oregon Health Division. Should you experience any problems with your water or just want to ask a question, please contact us. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.*

*This statement is a mandatory requirement from the EPA regardless of lead levels.*

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Junction City is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

*What about people with special health problems?*

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

### *Did You Know?*

Cross-contamination is the leading cause of waterborne disease. Cross-Contamination occurs whenever the water contacts anything that is contaminated or objectionable. Wherever this can occur is called a "cross-connection." As the water purveyor, we are mandated by State of Oregon Drinking Water rules to eliminate or control all actual and potential cross-connections.

A cross-connection is any actual or potential connection between drinking water piping and any other substance. Examples of cross-connections include: residential irrigation, fire sprinkler systems, commercial beverage dispensers, and your garden hose. If you would like to know if your home or commercial building is free of cross-connections and drinking water safe, please call our specialist at (541) 998-3125 for a free safety survey.

If you know of any backflow assemblies at your property, please be sure to have them tested annually by a certified tester.

### Definitions:

**Action Level (AL)** - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

**Maximum Contaminant Level (MCL)** - The "Maximum Allowed" is 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. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Maximum Contaminant Level Goal (MCLG)** - The "Goal" is 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.

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.

**Parts per billion (ppb) or Micrograms per liter (mg/L)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Water Test Results - Substances Detected

Inorganic Chemicals (IOCs) - Regulated

<i>Contaminant (year detected)</i>	<i>Violation Y/N</i>	<i>Level Detected</i>	<i>Unit of Measure</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Nitrate (2025)	N	ND	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Arsenic (2022)	N	ND	mg/l	NA	0.0100	Erosion of natural deposits
Copper (2025)	Y	100% of homes tested (41/41) were less than the AL of 1.3	mg/l	1.3	AL = 90% of homes tested must have lead levels less than 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (2025)	Y	Of the 41 homes tested 40 homes were less than the AL of 0.015	mg/l	0.015	AL = 90% of homes tested must have lead levels less than 0.015	Corrosion of household plumbing systems, erosion of natural deposits

Microbiological

<i>Contaminant (year detected)</i>	<i>Violation Y/N</i>	<i>Level Detected</i>	<i>Unit of Measure</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Total Coliform (2025)	N	0 positive in 108 Distribution samples 1 positive in 6 Source Assessment samples	mg/l	NA	Systems that collect <40 samples/month = 1 positive sample/month	Naturally present in the environment. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

**The following substances were tested for, but not detected in the city's drinking water:**

(Sample locations: DWPS & Bailey Park Well)

Radionuclides: Gross Alpha, Radium 226/228, Uranium and Barium

Synthetic Organic Contaminants including Pesticides and Herbicides - Regulated (SOC): 2,4-D; 2,4,5-TP (Silvex); Alachlor (Lasso); Atrazine; Benzo(a)pyrene (PAH); BHC-gamma (Lindane); Carbofuran; Chlordane; Dalapon; Di(2-ethylhexyl)adipate; Di(2-ethylhexyl) phthalate; Dibromochloropropane; Dinoseb; Diquat; Endothal; Ethylene Dibromide (EDB); Glyphosate; Heptachlor; Heptachlor Epoxide; Hexachlorobenzene (HCB); Hexachlorocyclopentadiene; Methoxychlor; Pentachlorophenol; Picloram; Total Polychlorinated Biphenyls (PCBs); Simazine; Toxaphene; Vydate (Oxamyl); Endrin

Synthetic Organic Contaminants including Pesticides and Herbicides - Unregulated (SOC): 3-Hydroxycarbofuran; Aldicarb; Aldicarb Sulfone; Aldicarb Sulfoxide; Aldrin; Butachlor; Carbaryl; Dieldrin; Dicamba; Methomyl; Metolachlor; Metribuzin; Propachlor

Volatile Organic Contaminants - Regulated (VOC): 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; 1,2-Dichloroethane; 1,2-Dichloropropane; 1,2,4-Trichlorobenzene; Benzene; Carbon Tetrachloride; Cis-1,2-Dichloroethylene; Dichloromethane; Ethylbenzene; Monochlorobenzene; o-Dichlorobenzene; p-Dichlorobenzene; Styrene; Tetrachloroethylene; Toluene; Trans-1,2-Dichloroethylene; Trichloroethylene; Xylenes; Vinyl chloride; Chlorobenzene

Volatile Organic Contaminants - Unregulated (VOC): 1,1-Dichloroethane; 1,1-Dichloropropene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; 1,2,3-Trichloropropane; 1,3-Dichloropropane; 2,2-Dichloropropane; Bromobenzene; Bromomethane; Chloroethane; Chloromethane; o-Chlorotoluene; p-Chlorotoluene; Dibromomethane; m-Dichlorobenzene; 1,3-Dichloropropene; Methyl tert-butyl ether (3rd&Cedar)-Bromodichloromethane; Bromoform; Chlorodibromomethane; Chloroform

**\* All water test results in the detected substances tables on pages 4 and 5 are the most recent monitoring data done in compliance with the regulations.**

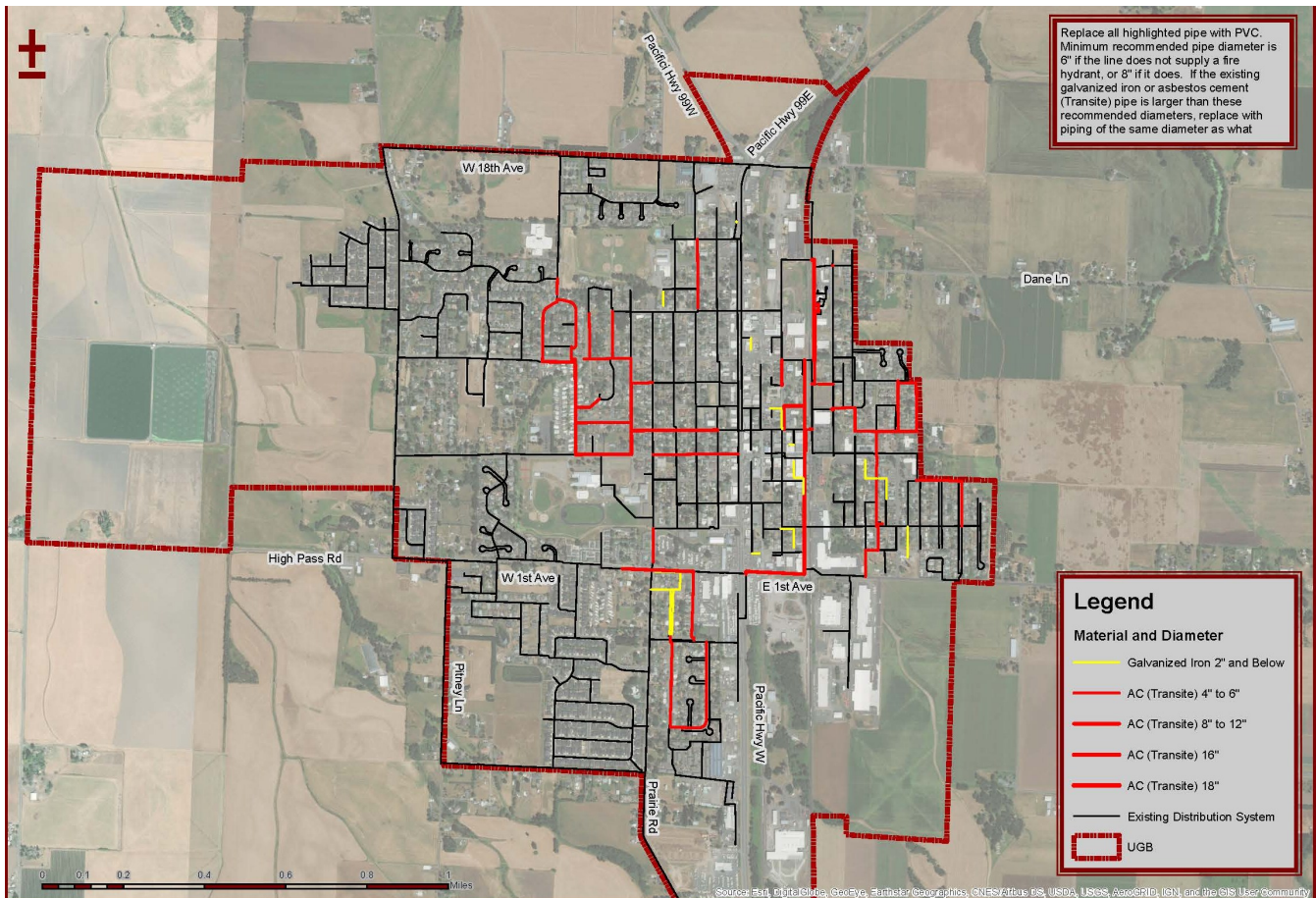
Disinfection By-Products (DBP)

Contaminant (year detected)	Violation Y/N	Level Detected	Unit of Measure	MCLG	MCL	Likely Source of Contamination
Total Trihalomethanes (TTHM) (2025)	N	0.00062 1105 SW Coral  0.0039 Elevated South	mg/l	NA	0.08	By-products of disinfection process.
Halo-Acetic Acids (HAA5) (2025)	N	ND 1105 SW Coral  0.0012 Elevated South	mg/l	NA	0.06	By-products of disinfection process.

Are there any plans to improve the water system?

Bailey Park Well was put online in 2025.

As the City continues its programs to maintain a safe and dependable water supply, it is necessary to make improvements in our water system. With City Council approval, the City will continue to make improvements to the drinking water system. From the Junction City Water Master Plan, it is proposed to replace galvanized and asbestos cement pipe with PVC pipe.



## *Water Heater Thermal Expansion*

### **What is Thermal Expansion and why is it dangerous?**

Most homes are supplied with hot water from an electric or gas heated tank. Until the heating element stops working, and one is faced with a cold shower, the water heater is usually taken for granted. However, if not properly maintained, a water heater may become a safety hazard. Water expands in volume as its temperature rises. The extra volume caused by thermal expansion must go somewhere. If not, the heated water creates an increase in pressure. This is the principle of a steam engine.

The temperature and pressure in the water heater is reduced when hot water is withdrawn from a faucet and cold water enters the tank. The increase in pressure from thermal expansion can also be reduced by water flowing back into the public water system. However, when a check valve, pressure-reducing valve or backflow preventer is installed in the service pipe a “closed system” is created. Provisions must be made for thermal expansion in these cases. Residents that have backflow prevention devices attached to their water line are at an increased risk to thermal expansion.

The thermostat of the water heater normally maintains the water temperature at about 130°F (54°C). However, if the thermostat fails to shut off the heater, the temperature of the water will continue to increase. If the water temperature increases to more than 212° F (100° C), the water within the tank becomes “super heated”. When this super heated water is suddenly exposed to the atmosphere when a faucet is opened, it instantly flashes into steam and a violent reaction may result. As the pressure within the tank continues to build up under super heated conditions, the tank may explode.

### **Does having a backflow on my water line affect Thermal Expansion?**

It is important for residents to understand that with the addition of a backflow prevention assembly connected to their water line that the chances of thermal expansion occurring increase. Water normally flows in one direction, from the public water system through the water meter and finally to the customer’s tap. This is the only direction that any water distribution system is setup for, however under certain conditions water can flow in the reverse direction. Water flowing in the reverse direction is known as backflow. Backflow occurs when backsiphonage or backpressure conditions are created within a water line.

Backsiphonage: is water movement in the unintended direction through the force of suction created by a vacuum. A vacuum may occur due to a loss of pressure in the water distribution system during a high withdrawal of water or when a plumbing system break occurs, and also during the shutdown of the main distribution line in some plumbing systems. A reduction of pressure below atmospheric pressure results in a vacuum within the piping that could create backsiphonage (suction) within the water line.

Backpressure: may be created when a source of pressure, such as from thermal expansion, creates a pressure greater than the supplied pressure from the distribution system and pushes the water backwards in the opposite direction.

### **Backflow: An added ingredient to the danger**

A backflow assembly/device connected to the residents’ water line will usually\* stop the water moving in the reverse direction and prevent backflow and a possible cross-connection (contact between potable and non-potable water). This is how the closed loop system is created. When pressure buildup in the water heater exceeds the tanks’ capacity, the pressure as a last resort, will travel back up the incoming water line until it reaches the backflow assembly/device, which blocks and stops the movement. Once the pressure expansion is blocked a very dangerous situation develops as the pressure continues to build within the system which could ultimately lead to a violent rupture within the water tank or water line.

\* Denotes that only a backflow assembly that is properly installed, used, maintained and tested annually will prevent backflow

### **What should I do to protect myself from Thermal Expansion?**

- The homeowner should check to see that a expansion tank and T & P Valve are in place. If there is any doubt, the homeowner should contact a licensed plumber.
- The T & P Valve should be periodically inspected to ensure that it is properly operating. Some T & P Valves are equipped with a test lever. Manually lifting the lever unseats the valve, allowing water to discharge. If water continues to leak from the T & P Valve after closing, the valve may need to be replaced. A drain line must be installed to avoid water damage and scalding injury when the valve operates.
- The T & P Valve should be periodically removed and visually inspected for corrosion deposits and to insure it has not been improperly altered or repaired.
- The above work can best be done and checked by a licensed plumber.