

# The City of Garibaldi 2017 Public Water System Consumer Confidence Report

The City of Garibaldi is pleased to present our annual Water Quality Report for 2017. This report provides information about our municipal drinking water and the system that provides it. We also want you to know what you can expect from our city now and in the future when it comes to our water and how we deliver that water to you.

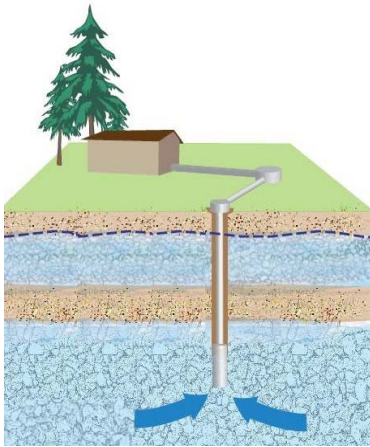
Why do we provide this report? By an act of the United States Congress, all public water systems are required to produce and distribute a Consumer Confidence Report each year. Most of the information in this report is required by the Federal Environmental Protection Agency and the Oregon Health Authority's Drinking Water Program, who want to be sure that you know what is in the drinking water that we provide.

The City of Garibaldi is proud of drinking water that it produces and distributes, and always strives to provide safe and great tasting water to all of its consumers. If you have any questions about our water, how it's treated, or how we meet the very high standards that we have set for ourselves, please contact the City of Garibaldi at (503) 322-3327, or by email at [city@ci.garibaldi.or.us](mailto:city@ci.garibaldi.or.us). We will always take the time to answer your questions and provide you with all the information you need.

## Water Quality for 2017

In accordance with federal and state requirements, the City monitors for over 100 regulated and unregulated known contaminants of drinking water. Within this document you will find tables that show test results from samples taken at the water source (wellfield) and from various points within the distribution system. Samples are taken year round, every year, for various substances and compounds. All monitoring data in this report are from 2017 or earlier. If a known health-related contaminant is not listed in this report, we did not detect it in our drinking water. It's important to realize that much of the information in this report is technical and is provided in a manner that complies with state and federal regulations. If you any questions about the data or the statements made in this report do not hesitate to contact our office at (503) 322-3327.

### Garibaldi Water Sources at a Glance



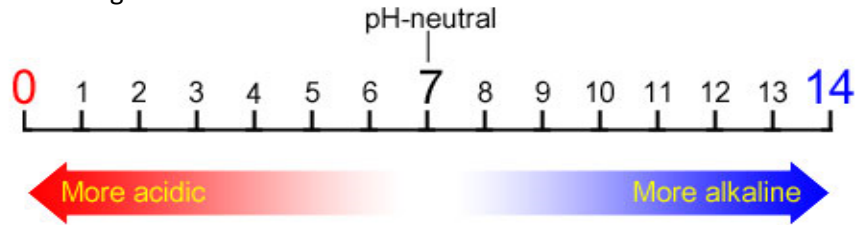
- **Miami River Watershed Wells (#1 & #2)** – For almost 40 years, Garibaldi's drinking water has come exclusively from the Miami River Watershed. The city operates two groundwater wells located in the Miami River watershed basin. These wells tap an aquifer located roughly 80 feet below the surface. In 2017, Garibaldi drew 100 percent of its water from these sources.
- **Alternative Sources** – Over the years the city has inherited and acquired other water sources. In addition to the city's two active wells, the city maintains perfected (which means established and dedicated) water rights to a number of surface water sites on Lagler, Struby and Electric Creeks. While the city does not utilize these sites right now, we maintain these sites as back-up sources to ensure an adequate supply of water is available to our community now and in the future.

### How Do We Treat Our Drinking Water?

As you've read, our water in 2017 was entirely supplied from the city's well sources on the Miami River. The water we pump from these wells consistently passes the state and federal requirements for drinking water without treatment; however, we still administer a small amount of treatment for two reasons:

- 1) We need to make sure that the pH of our water, which is the measure of how acidic or alkaline the water is, stays at a level that is just above neutral, which is 7 on the pH chart. We add a small amount of caustic soda to our water to raise its pH from its natural level of about 6.7. The reason for this is to prevent our water from leaching lead and other substances out of older pipes and fixtures. By adding a little caustic soda, we raise the

pH and slowly create a thin layer of scaling in the exposed surface of older pipes and fixtures. While leaching of lead and other metals is not an issue in our municipal water system, this can be an issue with plumbing found in older homes and buildings.



- 2) We need to constantly ensure your safety from microbial contaminants, viruses, bacteria and other living organisms, and to do this we add Chlorine to our water. Chlorine is disinfectant that can be safely added to drinking water in small quantities, and once its added it will naturally dissipate from the water over time. While our water supply has passed all testing for these contaminants for many years, we do not want to take the chance that such contaminants could get into the water somewhere in the distribution system and cause health problems for our consumers. The city does add the smallest amount of chlorine required by state law, and we frequently test for the amount of chlorine present at the farthest ends of the system to ensure that we are adding just enough to meet this standard.

### Frequently Asked Questions About Our Water

**Is fluoride added to Garibaldi's drinking water?** No. Fluoride is not added to Garibaldi's drinking water.

**Why is my water discolored at times?** There can be many reasons for discoloration of tap water. In some situations this can be a result of water system maintenance. However, it can also be a result of your plumbing. If you notice any discoloration of your water you should contact Garibaldi Public Works at (503) 322-0217, or the City of Garibaldi at (503) 322-3327.

### Special Notice for Immuno-Compromised People

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. The Federal Environmental Protection Agency (EPA) and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

### Why Do We Treat Our Drinking Water?

In order to ensure that our tap water is safe to drink, the EPA and the Oregon Health Authority (OHA) have regulations that limit the amount of certain contaminants in water provided by public water systems, and that also require routine monitoring for these contaminants by testing water samples taken from the water source and from various points in the distribution system. The Federal Food and Drug Administration (FDA) also regulate limits for contaminants in bottled water, which must provide the same level of protection for public health.

#### **Contaminants in drinking water sources may include:**

- Inorganic contaminants, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, or farming – see table 1.
- Radioactive contaminants, which can occur naturally – see table 2.
- Certain inorganic compounds which can found in the drinking water system resulting from the deterioration of older water mains – see table 3.

- Microbial contaminants, such as viruses and bacteria, which may come from wildlife or septic systems – see *table 4*.
- Certain chemical compounds which can occur as a result of the disinfection process – see *table 5*.
- Pesticides and herbicides, which may come from a variety of sources such as farming, urban stormwater runoff, and home or business use.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes, and can also come from gas stations, urban stormwater runoff, and septic systems

**Test Results for 2017 and Before**

<b>Table 1. Test Results from Wellfield - Inorganic Contaminates</b>						
Contaminant	Level Detected	Unit of Measurement	MCL	MCLG	Complies	Likely Source of Contamination
Arsenic	Not detected	Parts per Million	0.01	1.1	Yes	Runoff from orchards - Runoff from glass or electronics production wastes - Erosion of natural deposits
Nitrate	0.883	Parts per Million	10	10	Yes	Runoff from fertilizer use - Leaching from septic tanks and sewerage - Erosion of natural deposits
<i>Average Water Temperature was 10.6 Celsius, Sampled and Tested (Arsenic, 2017) (Nitrate, 2017)</i>						

<b>Table 2. Radioactive Contaminates</b>					
Contaminant	EPA Code	Method	Results	Lab Reporting Limit	EPA Limit
Gross Alpha	4002, 4000	E900.0	Not Detected	0.9	15
Combined Radium 226/228	4010	E903.0 & RA-05	Not Detected	0.7	5
Uranium	4006	E200.8	Not Detected	0.001	0.03
<i>Sampled and Tested February 2011</i>					

<b>Table 3. Inorganic Contaminates</b>						
Contaminant	Level Detected	Unit of Measurement	MCL	MCLG	Complies	Likely Source of Contamination
Asbestos	< 0.136	MFL	7	7	Yes	Cement asbestos pipe in the distribution system
<i>Sampled and Tested 2009</i>						

<b>Table 4. Microbiological Contaminates</b>					
Contaminant	Violations In 2017	Positive Results in 2017	Goal	What Constitutes a Violation	Likely Source of Contamination
Total coliform bacteria	No	0	0	One monthly positive sample for total coliform	Naturally present in the environment
Fecal coliform and E-coli	No	0	0	A routine sample and repeat sample show total coliform positive, and one is also fecal coliform E-coli positive	Human and animal fecal waste
<i>Sampled and Tested 2017</i>					

<b>Table 5. Test Results From Distribution System</b>			
Trihalomethanes - Test Method: EPA 524.2		Haloacetic Acids - Test Method: EPA SM6251B	
Contaminant	Results	Contaminant	Results
CUCI3 (chloroform)	Not detected	MCAA (Monochloroacetic Acid)	Not detected
CHBrCl2 (Bromodichloromethane)	Not detected	MBAA (Monobromoacetic Acid)	Not detected
CHBr2Cl (Dibromochloromethanes)	0.0015	DCAA (Dichloroacetic Acid)	Not detected
CHBr3 (Bromoform)	Not detected	TCAA (Trichloroacetic Acid)	Not detected
Total THMs	0.0015	DBAA (Dibromoacetic Acid)	Not detected
		Total HAA5s	Not detected
<b>Maximum Contaminant Level Allowed</b>	<b>0.0800 mg/l</b>	<b>Maximum Contaminant Level Allowed</b>	<b>0.0600 mg/l</b>
<i>Sampled and Tested August 7, 2017</i>		<i>Sampled and Tested August 8, 2017</i>	

## Lead, and What You Should Know About Our Drinking Water

You've probably heard a lot about lead in public water supplies and schools over recent years. It's important to understand how lead gets into your drinking water, what the health risks associated with lead are, and what makes our water supply different from other communities' water systems. The city tests for lead and copper every three years by taking a sample at the wells site and other samples throughout the system. These samples are specifically taken from certain residential and commercial properties, and are collected from typical faucets in typical locations. These tests are meant to sample the water in our system that is most likely to have lead or copper leaching into the water. *Table 6* shows the results for 2017.

Table 6. Lead and Copper Test Results from Residential and Commercial Sites							
Contaminant	90th Percentile	Unit of Measurement	Goal	Action Level	Homes exceeding Action Level	Complies	Likely Source of Contamination
Lead	0.002	Parts per Million	Not Detected	0.015	0	Yes	Household fixtures
Copper	0.295	Parts per Million	1.3	1.3	0	Yes	Corrosion of household plumbing systems, erosion in natural deposits, leaching from wood preservatives
<i>Sampled and Tested 2015</i>							

### **Lead in Household Plumbing:**

Exposure to lead through drinking water is possible if materials in a building's plumbing contain lead. The level of lead in water can increase when water stands in contact with lead-based solder and brass faucets containing lead.

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 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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 LeadLine, 503-988-4000, [www.leadline.org](http://www.leadline.org) or the Safe Drinking Water Hotline 800-426-4791, [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



People are exposed to lead in many other ways. In our community, dust from paint in homes built before 1978 is the most common source of exposure to lead. Other sources include soil, pottery, traditional folk medicines or cosmetics, some sports equipment such as fishing weights and ammunition, and some occupations and hobbies.

### **Corrosion Treatment:**

The city's approach to corrosion control treatment reduces corrosion in plumbing by increasing the pH of the water. We use caustic soda in a liquid form, which is basically a concentrated salt, to raise the pH of the water to between 7.2 and 7.5. This treatment reduces the chance that our water will leach lead and other minerals into the water that you drink. When you look at most public water systems across the county, test results with and without pH adjustment show over a 50 percent reduction in lead at the tap with pH adjustment. Our treatment does help to reduce the amount of lead found at the tap in most homes; however, the type of plumbing found in a home, business or public building will have the greatest effect on the amount of lead that can show up in a test.

If you are concerned that your home tap water may have lead, call the LeadLine for a free lead-in-water test kit and to learn ways to reduce your exposure to all sources of lead. This program targets testing the water in households most at risk from lead in water. These are homes built between 1970 and 1985, where pregnant women or children age six or younger reside.

### **Easy Steps to Avoid Possible Exposure to Lead in Drinking Water**

- Use cold, fresh water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water and can be passed on in food and drink prepared with hot water from the tap.

- Test your water for lead. Contact the LeadLine at [www.leadline.org](http://www.leadline.org) or (503) 988-4000 to find out how to get a free lead-in-water test.
- Regularly clean your faucet aerator. Particles containing lead from solder or household plumbing can become trapped in your faucet aerator. Regular cleaning will remove these particles and reduce your exposure to lead.
- Consider buying low-lead fixtures. New brass faucets, fittings and valves may contribute to lead in your drinking water. Federal law currently allows brass fixtures, such as faucets, to contain up to 8 percent lead. These fixtures are labeled as “lead free.” When buying new fixtures, consumers should seek out those with the lowest lead content. Visit [www.nsf.org](http://www.nsf.org) to learn more about lead content in plumbing fixtures.
- Run your water to flush the lead out. If the water has not been used for several hours, run each tap for 30 seconds to two minutes or until it becomes colder before drinking or cooking. This flushes water that may contain lead from the pipes.
- Do not boil water to remove lead. Boiling water will not reduce lead.
- Test your child. Ask your physician or call the LeadLine to find out how to have your child tested. A blood lead level test is the only way to know if your child is being exposed to lead.

### **Our Groundwater Needs Protection**

Garibaldi’s two wells are fed by water that moves from the surface to an aquifer below. An aquifer such as ours consists of alluvial soils, which is a substance made up of fine grains of sand and gravel. Water fills and travels through the tiny spaces of what is called the alluvium. The alluvium is partially protected by an impermeable layer of silt and clay. However, there are areas where water slowly soaks through the soil and eventually reaches the alluvium – this is the process that recharges a well and keeps it usable for long-term water production. At the surface, the land, streams, creeks and rivers that allow water to move down through the ground and into the alluvium make up an area that is often referred to as the well field. When water collects in the well field area, it seeps through surface layers of soils, trees and plant materials that help filter the water as it soaks into the ground.

This natural process is very sensitive to changes in the environment, as well as pollution and unintentional contamination. When hazardous materials spill onto the ground, these materials can be carried in the ground by rain or other water sources, and the groundwater underneath this site can become contaminated. Once polluted, clean-up or treatment of a groundwater source can take years and be very expensive. And in some situations, a groundwater source can become polluted to a point that it cannot be used to produce water suitable for human consumption. It’s important to know that whatever we allow to spill on the ground, into a creek or river, or even down your driveway, can eventually find its way back into the very water source that our community depends on.

Household products such as solvents found in paint thinner, furniture stripper, spot remover and charcoal lighter fluid pose the greatest risk to groundwater.

### **What you can do at home to protect our groundwater?**

- Store products that contain hazardous ingredients in their original container and then in a plastic bucket or tray. This will help keep the hazardous products safely contained should a spill or leakage occur.
- Do not pour household hazardous products down household drains, storm drains, or on the ground.

To safely dispose of household hazardous products in Tillamook County, contact Tillamook County Solid Waste at (503) 815-3975, or look them up on their website at [www.co.tillamook.or.us/gov/solidwaste](http://www.co.tillamook.or.us/gov/solidwaste). At various times of the year there are places in the county that you can take your hazardous waste to dispose of safely. Our county’s program will accept nearly all household items labeled with: DANGER • WARNING • CAUTION • FLAMMABLE • IGNITABLE • POISON • TOXIC • COMBUSTIBLE • CORROSIVE • OXIDIZER. Please be careful with the chemicals that you buy and use, and always encourage others to safely and responsibly dispose of all hazardous waste products.

## **What the EPA Says About Drinking Water Contaminants**

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 effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800-426-4791, or accessed on their website at <http://water.epa.gov/drink>.

### **EPA WaterSense Program**

The WaterSense label makes it easy for consumers to recognize products and programs that save water without sacrificing performance or quality. Independent, third-party licensed facilities certify that products meet Environmental Protection Agency criteria for water efficiency and performance by following testing and certification protocols specific to each product category. Products that are certified to meet EPA specifications are allowed to bear the WaterSense label. A number of common fixtures are labeled by the WaterSense Program, including toilets, showerheads and more.

### **Frequently Asked Questions about Our Drinking Water**

#### **Definitions**

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.

Parts per billion (ppb) or Micrograms per liter – one part per billion corresponds to one minute in 2,000 years. Or a single penny in \$10,000,000.

Parts per trillion (ppt) or nanograms per liter – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Action Level -- concentration of a Contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Contaminant Level (MCL) – 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.

Maximum Contaminant Level Goal (MCLG) – 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.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

For Additional Information contact the Oregon Health Authority Drinking Water Program at 971-673-0405, or at [www.oregon.gov/DHS/ph/dwp/](http://www.oregon.gov/DHS/ph/dwp/)

Garibaldi Public Water System #4100311