

# TOWN OF HAMILTON

Public Water System ID# 307000

**March 2024**

I am very pleased to provide you with this year's Annual Water Quality Report. I want to keep you informed about the excellent water and services delivered to you over the past year. The goal has always been to provide you with a safe and dependable water supply.

We have worked hard to reduce the amount of water lost to leaks and unauthorized connections, and YOU have all worked hard to use your water more efficiently. Over the past two years, together we have reduced the amount of water pumped from the well.

Please continue to make the effort to reduce your water usage by 1% every year.

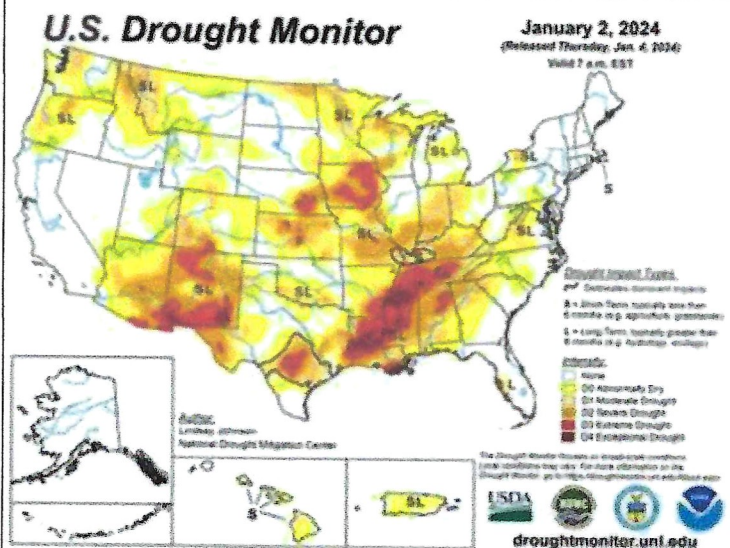
**GREAT JOB, EVERYONE!**

If you have any questions about your water system, please feel free to attend any Council meeting. The Council meets the second Tuesday of each month at 7:00 p.m. at Town Hall. If there is a water emergency please call Si Adams at 360-610-3770 or Mayor Mandi Bates at Town Hall;

For billing or payment questions, please call, Town Clerk 360-826-3027.

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## Why is Drought Important?

The United States is vulnerable to the social, economic, and environmental impacts of drought. More than 100 years of U.S. weather records indicate that there have been three or four major drought events during that period. Two of these, the 1930's Dust Bowl drought and the 1950's drought, each lasted five to seven years and covered large areas of the continental United States.

Droughts are among the most costly weather events. The U.S. sustained 114 weather/climate disasters from 1980 through 2011, in which overall damages /costs reached or exceeded \$1 billion. The total standard losses for the 114 events exceed \$800 billion.

During that period, there were 16 billion-dollar droughts, totaling \$195 billion in losses, which amounts to approximately \$12 billion for each billion-dollar drought event that occurred.

## Well Water Sample Results

Constituent	MCL or AL	MCLG	Hamilton Water	SRL	Sample Date	Violation	Typical Source
Nitrate (ppm)	10	10	0.1300	0.10	July 2024	NO	Run off from fertilizer; leaching septic tanks; sewage; or erosion of natural deposits in rocks or soils

**About Nitrate /Nitrite:** Nitrate/Nitrite in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

## Distribution System Sample Results

Constituent	MDRL	MDRLG	Hamilton Water	SRL	Sample Date	Violation	Typical Source
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### Trihalomethanes / Disinfection Byproducts South Street

Chloroform (µg/L)			.5	0.60	Aug 2023	NO	Result of chlorination
Bromodichloromethane (µg/L)			.6	0.60	Aug 2023	NO	Result of chlorination
Dibromochloromethane (µg/L)			.6	1.50	Aug 2023	NO	Result of chlorination
Total Trihalomethanes (µg/L)	80	80	1.2		Aug 2023	NO	Result of chlorination

**About Total Trihalomethanes:** Some people who drink water containing trihalomethanes (which include Chloroform, Bromodichloromethane and Dibromochloromethane) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

## Distribution System Sample Results

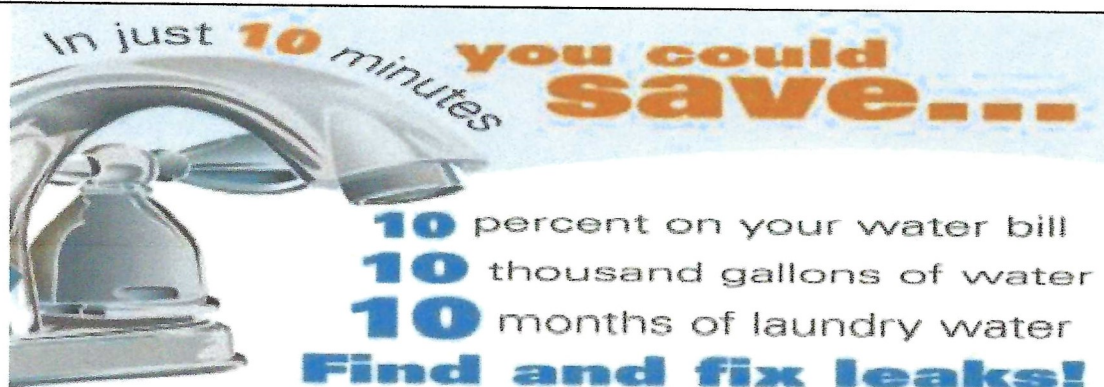
Constituent	MCL or AL	MCLG	Hamilton Homes	SRL	Sample Date	Violation	Typical Source
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### Average Sample Results (five samples)

Copper (ppm)	1.3	1.3	.0190	0.02	Aug 2022	NO	Leaches from pipes, plumbing
Lead (ppb)	15	15	.0010	2.0	Aug 2022	NO	Leaches from pipes, plumbing

**About Copper:** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

**About Lead:** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).





Well Water Sample Results							
Constituent	MCL or AL	MCLG	Hamilton Water	SRL	Sample Date	Violation	Typical Source
Arsenic (ppm)	10	10	0.0020	0.2	Sept 2016	NO	Erosion of natural deposits; Runoff from electronics production wastes
Barium (ppm)	2.0	N/A	0.0120	0.40	Sept 2016	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	0.1300	0.20	Sept 2024	NO	Run off from fertilizer; leaching septic tanks; sewage; or erosion of natural deposits in rocks or soils
Nitrate/Nitrite (ppm)	N/A	N/A	0.2000	0.50	Sept 2016	NO	Run off from fertilizer; leaching septic tanks; sewage; or erosion of natural deposits in rocks or soils
Chlorides (ppm)	250	N/A	1.5	20.0	Sept 2016	NO	Erosion of natural mineral deposits
Conductivity (Umhos/cm)	700.00	N/A	222.00	70.0	Sept 2016	NO	Amount of dissolved solids in water
Manganese (ppm)	5 (SMCL)	5	.0010	1.00	Sept 2022	NO	Erosion of natural mineral deposits
Sodium (ppm)	N/A (SMCL)	N/A	2.90	5.00	Sept 2016	NO	Erosion of natural mineral deposits
Hardness (ppm)	N/A (SMCL)	N/A	103.10	10.0	Sept 2016	NO	Erosion of natural mineral deposits
Turbidity (NTU)	N/A (SMCL)	N/A	0.45	0.10	Sept 2016	NO	Soil run off
Sulfate (ppm)	250.000 (SMCL)	N/A	9.4	50.0000	Sept 2016	NO	Erosion of natural mineral deposits
Zinc (ppm)	5.0000 (SMCL)	N/A	0.010	0.20	Sept 2016	NO	Erosion of natural mineral deposits

**About Arsenic:** Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

**About Barium:** Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

#### **About**

**Nitrate /Nitrite:** Nitrate/Nitrite in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

**About Manganese:** Manganese can cause a bitter metallic taste in water and leave visible black "specks" in ice cubes. Manganese can also produce staining and cause water to have brown or black discoloration.

**About Sodium:** Sodium is an abundant and widespread constituent of rocks and soils in Washington. At sufficient concentrations, sodium can impart a salty taste to water and beverages.

#### **About**

**Hardness:** Extreme hardness can cause calcium and magnesium build-up in distribution pipes and household plumbing. **About Conductivity:** Conductivity measures the ability of a solution to conduct an electric current between two electrodes. In solution, the current flows by ion transport. Therefore, with an increasing amount of ions present in the liquid, the liquid will have a higher conductivity. If the number of ions in the liquid is very small, the solution will be "resistive" to current flow. AC current is used to prevent complete ion migration to the two electrodes.

#### **About**

**Chloride:** Chloride is a dissolved organic material and poses no health risk. Inorganic constituents such as chlorides are also common causes of color. In general, the point of consumer complaint is variable over a range from 5 to 30 color units, though most people find color objectionable over 15 color units. Rapid changes in color levels may provoke more citizen complaints than a relatively high, constant color level. **Chloride can also be corrosive** and may cause corrosion of distribution system pipes, which can reduce water flow.

**About Turbidity:** Turbidity has no health effects. Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

**About Sulfate:** Sulfate is a substance that occurs naturally in drinking water. Health concerns regarding sulfate in drinking water have been raised because of reports that diarrhea may be associated with the ingestion of water containing high levels of sulfate. Of particular concern are groups within the general population that may be at greater risk from the laxative effects of sulfate when they experience an abrupt change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations.

**About Zinc:** Zinc is a substance that occurs naturally in drinking water. At sufficient concentrations, Zinc can impart a metallic taste to water and beverages.



### Health Effects (continued)

#### **Aesthetic Effects**

- *Standards related to odor and taste:* Chloride, Copper, Iron, Manganese, Sulfate, and Zinc.

*Odor and Taste* are useful indicators of water quality even though odor-free water is not necessarily safe to drink. Odor is also an indicator of the effectiveness of different kinds of treatment. However, present methods of measuring taste and odor are still fairly subjective and the task of identifying an unacceptable level for each chemical in different waters requires more study. Also, some contaminant odors are noticeable even when present in extremely small amounts. It is usually very expensive and often impossible to identify, much less remove, the odor-producing substance.

- *Standards related to color:* Copper, Iron, and Manganese

*Color* may be indicative of dissolved organic material, inadequate treatment, high disinfectant demand and the potential for the production of excess amounts of disinfectant by-products. Inorganic contaminants such as metals are also common causes of color. In general, the point of consumer complaint is variable over a range from 5 to 30 color units, though most people find color objectionable over 15 color units. Rapid changes in color levels may provoke more citizen complaints than a relatively high, constant color level.

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. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

#### **Technical Effects**

- *Standards related to corrosion and staining:* Chloride, Copper, Iron, Manganese and Zinc.

*Corrosivity*, and *staining* related to corrosion, not only affect the aesthetic quality of water, but may also have significant economic implications. Other effects of corrosive water, such as the corrosion of iron and copper, may stain household fixtures, and impart objectionable metallic taste and red or blue-green color to the water supply as well. Corrosion of distribution system pipes can reduce water flow.

- *Standards related to scale and sediments:* Iron

*Scaling* and *sedimentation* are other processes which have economic impacts. Scale is a mineral deposit which builds up on the insides of hot water pipes, boilers, and heat exchangers, restricting or even blocking water flow. Sediments are loose deposits in the distribution system or home plumbing.

- Conductivity measures the ability of a solution to conduct an electric current between two electrodes. In solution, the current flows by ion transport. Therefore, with an increasing amount of ions present in the liquid, the liquid will have a higher conductivity. If the number of ions in the liquid is very small, the solution will be "resistive" to current flow. AC current is used to prevent complete ion migration to the two electrodes.
- Hardness is a measure of the amount of certain naturally occurring minerals found in water, namely calcium and magnesium. While calcium and magnesium are essential minerals for human health, hardness may cause spotting on dishes and shower walls, affect the lathering of soap (more hardness = less lathering or suds = more soap/detergent required to do the same job) or cause deposits on water related fixtures.

**Treated (or softened water) = 0**

**Slightly hard** = 1-2 grains per gallon (total grains x 17.1 equals ppm)

**Medium Hard** = 3-7 grains per gallon (total grains x 17.1 equals ppm)

**Hard** = 7-10.5 grains per gallon (total grains x 17.1 equals ppm)

**Extremely Hard Water** = 10.5+ grains per gallon (total grains x 17.1 equals ppm)

**Note:** Each ppm of iron equals 4 grains per gallon of hardness.

**IN CASE YOU ARE WONDERING WHY THERE ARE RESULTS FROM YEARS PRIOR TO 2017.** The codified federal regulation states: "Where a system is allowed to monitor for regulated contaminants less often than once a year, the tables must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. No data older than 5 years need be included."



## REQUIRED FEDERAL INFORMATION



### WHAT ABOUT BOTTLED WATER?

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 EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled 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, radio-active material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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**As a reminder in the summer, we are asking that you water only before 8:00 a.m. or after 8:00 p.m. Please water for only 30 minutes each day.**

**NO DAY-TIME WATERING.**

**If you who have an odd street number, please water on odd numbered days.**

**If you have an even street number, please water on even numbered days.**

**REMEMBER TO CHECK FOR LEAKS OFTEN AND GET THEM REPAIRED AS QUICKLY AS YOU CAN.**

**USE YOUR WATER WISELY**

Contaminants that may be present in source water before we provide it include:

- ***Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.*
- ***Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.*
- ***Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.*
- ***Radioactive contaminants**, which are naturally occurring.*
- ***Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.*

**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 microbial contaminants are available from the

**SAFE DRINKING WATER HOTLINE**

**1-800-426-4791**

**OR**

**WWW.EPA.GOV/SAFEWATER**



**WHAT DO YOU MEAN BY THAT?**

In this newsletter you will find some terms and abbreviations with which you might not be familiar. To help you better understand these terms we've provided the following 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 ( $\mu\text{g/L}$ )** - 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 (nanograms/L)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water that can be absorbed by the body.

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

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

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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.

**Maximum Residual Disinfectant Level (MRDL)**: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (e.g. chlorine, chloramines, chlorine dioxide).

**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.

**Suggested Maximum Contaminant Level (SMCL)**: No Maximum Contaminant Level has been set.

**Maximum Residual Disinfectant Level Goal (MRDLG)**: 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.

**Action Level (AL)**: the concentration of a contaminant which, when 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.

**N/A**: not applicable

**ND**: not detectable at testing limit

**SRL**: State Reporting Level

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This is Your 2022  
Water Quality Report

Questions?  
360-826-3027 or  
Townofhamilton.2010@gmail.com