



**Department of Public Works**  
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## **Annual Water Quality Report** For Calendar Year 2021

### **Your water:**

- **Is continuously tested**
- **Meets or exceeds Federal and State standards for safe drinking water.**

### **Purpose of Report**

This is an on-going series of annual reports on your public water system. Its purpose is to:

- Help you make informed decisions about your health,
- Furnish you information about the sources, delivery and quality of your water,
- Encourage communications between you and the Department of Public Works, &
- Involve you in the decisions about your public water system.

### **Your Comments**

Franklin City Council meets the second and fourth Mondays of each month at 7:00 p.m. in the City Council Chambers, 207 West Second Avenue. Contact Steve Watson at the Department of Public Works at 757-562-8564 if you are interested in participating in decisions that affect your drinking water.

### **Sources of Water**

The City of Franklin, three other municipalities and two large industries are permitted by the Virginia Department of Environmental Quality to withdraw groundwater from the **Potomac Aquifers** in the area. The City of Franklin owns and operates four wells for the purpose of supplying water for industrial, commercial and residential uses. A significant portion of the water is intended for human consumption, or drinking water, both tap water and bottled water. The City also complies with a Groundwater Withdrawal Permit issued by the Virginia Department of Environmental Quality (VDEQ). For informational purposes the VDEQ well numbers are provided in the following table.

#### **City Well Designations**

<b>Franklin Well No.</b>	<b>DEQ Well No.</b>
#4	233-014
#5	233-005
#6	233-015
#7	233-016

### Source Water Assessment

The Virginia Department of Health conducted a Source Water Assessment of the City of Franklin Waterworks in 2019. The well #4-College Drive was determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program, while wells #5-Hunterdale, #6-Pretlow and #7 –Hunterdale were determined to be of high susceptibility using the same criteria. The assessment report consists of maps showing the Source Water Assessment area, an inventory of known Land Use Activities and Potential Sources of Contamination, Potential Conduits to Groundwater, Susceptibility Explanation Chart, and Definitions of Key Terms. The report is available by contacting your waterworks operator/owner at the phone number or address included in the CCR.

### Delivery of Water

Water is delivered to you through a distribution system of pipe work. The City of Franklin has an active program of replacing undersized and older pipelines throughout the distribution system. The number of leaks per unit pipe length, age, work orders, cost for replacement, and reports of inadequate pressure are factors that determine replacement priority. The original goal of the program was to improve fire protection by increasing flow to the fire hydrants. The replacement program has also been effective in reducing system leaks.

Requests for utility location services have risen sharply. By responding promptly and by providing accurate information, the potential for future leakage and line breaks is reduced. Response time to line breaks and leaks also represents an important component of our water conservation efforts.

The City of Franklin drilled a new well which was placed online in December 2005. The new well was installed to increase production and to reduce fluoride levels to our customers.

### Safe Drinking Water Act Regulations

The quality standards for drinking water are established by the United States Environmental Protection Agency (EPA), and the Virginia Department of Health (VDH).

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### Water Quality Analysis

The following chart reports all the results of the chemical tests performed on water samples collected from 2015 through 2021. Some of our data may be more than one-year-old since the state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

### Water Quality and Health Information

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that **may be** present in source water 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, urban storm water runoff and residential uses.

*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.

*Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 (800-426-4791).

### **Vulnerability**

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 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 also available from the Safe Drinking Water Hotline (800-426-4791).

### **Definitions**

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table included shows the results of our monitoring for the period of January 1, 2015 to December 31<sup>st</sup>, 2021. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

*Non-detects (ND)* – lab analysis indicates that the contaminant is not present

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

*Picocuries per liter (pCi/L)* - is a measure of the radioactivity in water.

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

*Maximum Contaminant Level, or 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, or 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 Disinfection 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.

*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.

**Water Quality Results**

Contaminant	MCLG	MCL	Level Found	Range	Date of Samples	Typical Sources of Contaminants
Chlorine Residuals (ppm)	4.0 MRDLG	4.0 MRDL	0.59	0.12-0.77	2021	Water additive used to control microbes.
TTHMs (Total trihalomethanes) (ug/l)	0	80	8.4	5.6-8.4	July 2021	Byproduct of drinking water disinfection
HAA5 (Total Halocetic Acids) (ug/l)	0	60	< 1	NA	July 2021	Byproduct of drinking water disinfection
Fluoride (ppm)	4	4	3.62	3.06 – 3.62	2017 -2021	Erosion of natural deposits.
Gross Alpha (pCi/L)	0	15	4.1	ND – 4.1	2019 2020	Erosion of natural deposits.
Combined Radium (pCi/L)	0	5	1.0	0.1-1.0	2019 2020	Erosion of natural deposits
Gross Beta* (pCi/L)	0	50	3.1	0.9– 3.1	2019 2020	Decay of natural and manmade deposits
Contaminant	Action Level	Level Found	Range	Samples above AL	Date of Samples	Typical Sources of Contaminants
Copper (mg/l)	AL=1.3	0.117	0.005-0.211	0	2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	AL= 15	1.0	ND-11.0	0	2021	Corrosion of household plumbing systems; erosion of natural deposits

\*EPA considers 50pCi/L as the level of concern for beta particles.

**Additional Health Information – Fluoride**

This is an alert about your drinking water and cosmetic dental problem that might affect children under nine years of age. The drinking water provided by your community water system’s wells has a fluoride concentration of 3.06- 3.62 mg/l. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis).

Dental fluorosis in its moderate or severe forms may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the U.S. Environmental Protection Agency’s drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of the cosmetic dental problem. For more information, Contact Mr. Steve Watson at 757-562-8564.

Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call the NSF International at 1-877-NSF-HELP.

**Additional Health Information – 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 of Franklin 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 30 seconds to 2 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 <http://epa.gov/safewater/lead>. This statement about lead is required by law, however, tested lead levels are within safe limits for the City of Franklin Water Supply system.

**Other drinking water constituents you may be interested in:**

Contaminant	SMCL	Level Found	Range	Date of Samples	Typical Sources of Contaminants
Total Dissolved Solids (mg/L)	500	385	211 – 385	2018-2021	Erosion of natural deposits widely distributed in nature from industrial or domestic waste or the intrusion of coastal brine.
Sodium (mg/L)	NA	134	83.5 – 134	2018-2021	Erosion of natural deposits

**Total Dissolved Solids** - Total Dissolved Solids represent the concentration of individual dissolved ions. A high concentration of TDS may be the result of contamination from industrial or domestic waste or the intrusion of coastal brine. Water high in Total Dissolved Solid may cause hardness in water, deposits, colored water, staining, and salty taste. The Secondary Maximum Contaminant (SMCL) level for Total Dissolved Solids is 500 ppm.

**Sodium** - There is presently no established standard for sodium in drinking water. Water containing more than 270 mg/l should not be used as drinking water by those persons whose physician has placed them on moderately restricted sodium diets. Water containing more than 20 mg/l should not be used by persons whose physician has placed them on severely restricted sodium diets.

**Water Conservation Tips for Consumers**

The City of Franklin relies on groundwater to provide water to homes and businesses. In this area, groundwater is in limited supply so it is important that every user consider conservation measures in their homes and places of work.

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.

- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to conserve water reduce next month's water bill!
- Visit [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.