Why are there Contaminants in my Drinking Water?

Sources of drinking water (both tap water and bottled water) are derived from rivers, lakes, streams, ponds, reservoirs, wells, and springs. As water moves through the environment, it can come into contact with a wide variety of chemicals, microorganisms, and radioactive materials that can contaminate the water. As a result, it is important to have a system in place to monitor and control contaminants. In the United States, the Environmental Protection Agency (EPA) regulates contaminants by setting drinking water standards, or maximum contaminant levels (MCLs), and requires testing of drinking water supplies.

Contaminants

Microbial contaminants, such as viruses and bacteria that can cause disease, are naturally occurring. Inorganic contaminants, such as salts and metals can be naturally occurring or result from human activity. Organic chemical contaminants, such as those from cleaning products and gasoline, can be naturally occurring or result from human activity. Pesticides and herbicides, which can be a variety of chemicals used to control pests, are mainly the result of human activity. Arsenic and radionuclides are contaminants that can be naturally occurring or result from human activity.

The drinking water standard for arsenic is 10 ppb. The City’s drinking water contains 1 ppb arsenic concentration, lower than the standard. Water with more than 10 ppb arsenic can cause health problems, such as skin damage and circulatory problems. The drinking water standard for radionuclides (such as radon and radium) is 5 picocuries per liter. The City’s drinking water contains about 0.3 picocuries per liter. Radon is a radioactive gas that can form in water and enter homes through cracks in foundation walls and eaves, leading to potential health problems, such as lung cancer. The drinking water standard for lead is 15 ppb. The City’s drinking water contains a lead concentration of 0.015 ppb, lower than the standard. Lead in drinking water is harmful to all people, but children are particularly susceptible. Exposure to lead can cause delayed mental and physical development in young children. The drinking water standard for copper is 125 ppb. The City’s drinking water contains a copper concentration of 0.22 ppb, lower than the standard. Copper in drinking water can cause skin irritation and corrosion of plumbing fixtures.

Microbial and Disturbance Byproducts Rule

The Microbial and Disinfection Byproducts Rule (DBPR) requires monitoring for certain contaminants less than once per year because the concentrations are not expected to vary significantly from year to year. The City is required to test for certain contaminants at least once per year. The City’s drinking water meets the federal health-based drinking water standard for all the required contaminants.

Micropollutants

In 2017, the City of Santa Fe conducted a study to determine the presence of micropollutants in the City’s drinking water. Micropollutants are trace levels of chemicals that may not be detectable at the EPA’s health-based standards. The City’s drinking water contained micropollutants at trace levels, which is consistent with other studies of drinking water in the United States. The City’s drinking water contains micropollutants at trace levels, which is consistent with other studies of drinking water in the United States. The City’s drinking water contains micropollutants at trace levels, which is consistent with other studies of drinking water in the United States. The City’s drinking water contains micropollutants at trace levels, which is consistent with other studies of drinking water in the United States.

Table 1: Voluntary Monitoring Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Year Range</th>
<th>Concentration 2018 (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAA5</td>
<td>ppm</td>
<td>2016-2018</td>
<td>0.003-0.032</td>
</tr>
<tr>
<td>HAAs</td>
<td>ppm</td>
<td>2016-2018</td>
<td>0.002-0.032</td>
</tr>
<tr>
<td>Lead and Copper</td>
<td>ppm</td>
<td>2016-2018</td>
<td>0.0015-0.002</td>
</tr>
</tbody>
</table>

City of Santa Fe Water Quality Reports

The City of Santa Fe has a database of water quality monitoring and testing results. The database contains information about contaminants, such as arsenic and radionuclides, and their concentrations in the City’s drinking water. The database also contains information about the treatment processes used to remove contaminants, such as chlorination and filtration. The database can be accessed through the City’s Water Conservation Hotline (505) 955-4225.

Conserving Water... every drop counts

For information regarding the City’s water conservation program or to participate in the Water Conservation Program, please contact the City’s Water Conservation Hotline at (505) 955-4225.
### 2018 Water Quality Report

The City of Santa Fe’s Water Division (the City) is pleased to present its annual Water Quality Report (WQR) for the year 2018. The City’s commitment to providing safe and healthy drinking water is our mission. This report provides detailed information on the source water quality, treatment processes, and monitoring results for the water delivered to customers. The City produces drinking water for the City and its customers through the Buckman Water Treatment Plant (Buckman RWTP), which is located near the Rio Grande, approximately 15 miles northwest of Santa Fe. All our sources are located either in the City of Santa Fe or within the City limits. Surface water from the Santa Fe River and Rio Grande is treated through conventional and advanced treatment processes at the Cyanor River Water Treatment Plant and Buckman RWTP. Cruel Lake, a major reservoir in the City, is supplied by surface water from Cruel Lake and groundwater from the El Paso Ranch Aquifer. All water sources are treated prior to sale or distribution. The City’s distribution system consists of 1,800 miles of pipelines and is composed of cast iron, ductile iron, and polyvinyl chloride (PVC) pipe.

### Sources of Supply

- **Santa Fe River:** Supplies water to Buckman RWTP and the City’s drinking water supply. Surface water from the Santa Fe River and Rio Grande is treated at Buckman RWTP.
- **Cruel Lake:** Supplies water to Cruel Lake Water Treatment Plant.
- **El Paso Ranch Aquifer:** Supplies water to the City’s drinking water supply. Groundwater from the El Paso Ranch Aquifer is used to augment surface water supplies at Buckman RWTP.

### Treatment Technologies

- **Disinfection:** The minimum level of disinfectant residual required for control of microbial contaminants is set by rule. The City uses chlorine dioxide as a disinfectant and meets or exceeds all required levels. The City’s disinfection processes are designed to maintain residual levels as required by the State Water Quality Bureau. The City’s disinfection processes are designed to meet the requirements of the USEPA/State of New Mexico Water Quality Bureau.
- **Fluoridation:** In 2005, the New Mexico Environment Department (NMED) completed a fluoride assessment of the City’s fluoride levels in drinking water. The assessment included a review of the fluoride levels in the City’s water supply and recommended the addition of fluoride to the water supply to meet the U.S. Public Health Service (PHS) recommendation for fluoride levels. The City added fluoride to its water supply in 2005 to meet the PHS recommendation.

### Water Quality

- **Turbidity:** Turbidity is a measure of the amount of suspended matter in water. Turbidity is measured in nephelometric turbidity units (NTU). The maximum acceptable level of turbidity is 5 NTU.
- **TOC:** Total Organic Carbon (TOC) is a measure of the amount of organic material in water. The maximum acceptable level of TOC is 0.1 mg/L.
- **Nitrate:** Nitrate is a measure of the amount of nitrate in water. The maximum acceptable level of nitrate is 10 mg/L.
- **Barium:** Barium is a measure of the amount of barium in water. The maximum acceptable level of barium is 2 mg/L.

### Key Units, Terms and Abbreviations

- **ppb:** parts per billion, or micrograms per liter (µg/l)
- **pCi/L:** Counts per minute per liter (Cpm/l)
- **AL:** Action level: the concentration at which, if exceeded, requires a treatment technique to control the contaminant at the water utility.
- **LRAA:** Long-term running annual average: the average of the results from the treatment technologies and from the drinking water emergency response activity.
- **MCL:** Maximum Contaminant Level: this 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.
- **MCLG:** Maximum Contaminant Level Goal: this is the highest level of a contaminant that is allowed in drinking water. MCLGs are set as close to the MCLG as feasible using the best available treatment technology.
- **SMCL:** Secondary MCL: a level of a contaminant in drinking water below which there is no known or expected risk to health. SMCLs were established as guidelines to assist public water systems in setting their own treatment goals.
- **Note:** The city does not test for polycyclic aromatic hydrocarbons (PAHs) or the level of concern for polycyclic aromatic hydrocarbons.

### Additional Information

- **Contacts:** If you have any questions, comments, or suggestions regarding this report, please contact the City’s Water Quality Department at (505) 955-4202 or email at waterquality@santafenm.gov.