### Why are there Contaminants in my Drinking Water?

Sources of drinking water (fifth tap water) may include lakes, rivers, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and some other substances, resulting from the presence of minerals or compounds in the water. Contaminants in drinking water may include:

- **Microbial contaminants**, such as viruses and bacteria that may come from wastewater treatment plants, septic systems, animal waste, and sewers.
- **Inorganic contaminants**, such as salts and metals that can be naturally occurring from soil and rock, or that are brought into water by industrial or domestic wastewater discharges, oil and gas production, mining, and the disposal of wastes. Some of these contaminants are introduced into water as solid deposits when treated water is delivered to the Buckman Tank prior to distribution into City water systems.
- **Organic contaminants**, such as synthetic and natural substances, including synthetic organic chemicals, oils and grease, and pesticides that are introduced into water as solid deposits when treated water is delivered to the Buckman Tank prior to distribution into City water systems.
- **Radionuclides**, which can be naturally occurring, occurring from nuclear power plants and uranium mining, or that are introduced into water as solid deposits when treated water is delivered to the Buckman Tank prior to distribution into City water systems.

In order to ensure that tap water is safe to drink, EPA regulations limit the amount of certain contaminants in water delivered by public water systems. Some voluntary monitoring for specific contaminants does not necessarily indicate that water poses a health risk. MCLGs allow for a margin of safety.

### Definitional Monitoring

EPA has established certain contaminant levels (MCLs). Secondary Standards are non-enforceable standards that serve as guidelines to assist public water systems in managing their drinking water. The purpose of secondary standards is to protect against aesthetic or non-health effects results from the treatment of drinking water. The levels of a contaminant that are regulated and monitored are based on levels (SMCLs) that are regulated and monitored are based on levels (SMCLs).

### Cryptosporidium

Cryptosporidium is a parasite that is a common in surface water. Cryptosporidium is most commonly introduced into our source waters by erosion of natural deposits. As such, the reported concentrations for Cryptosporidium may be further diluted in the distribution system through mixing with water from other City sources.

In cooperation with Los Alamos National Laboratory (LANL) and the New Mexico Environment Department, the City has sampled water from the Buckman Tank for Cryptosporidium on a quarterly basis. Samples are analyzed by the Environmental Protection Agency (EPA) for the presence of Cryptosporidium. The EPA has established a level of detectability associated with natural sources. These wells are part of the 13 groundwater well systems that provide untreated water for the City of Santa Fe and are delivered to the Buckman Tank prior to distribution into City water systems.

The City of Santa Fe cryptosporidium monitoring locations are listed in the table below. The results of this study show that the lowest levels (0.023 ng/mL) of Cryptosporidium were found in 2013. Cryptosporidium levels were determined by the Environmental Protection Agency (EPA) and are reported for the years 2010 through 2013. The results shown in the table below indicate that the levels of Cryptosporidium in drinking water have not exceeded the MCL.

<table>
<thead>
<tr>
<th>Sample Year</th>
<th>Cryptosporidium (ng/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>(ND to 1.28)</td>
</tr>
<tr>
<td>2011</td>
<td>36 - 320</td>
</tr>
<tr>
<td>2012</td>
<td>1.21</td>
</tr>
<tr>
<td>2013</td>
<td>(0.040 - 0.063)</td>
</tr>
</tbody>
</table>

Cryptosporidium levels do not consistently exceed the MCL for Cryptosporidium. The City of Santa Fe has not detected Cryptosporidium in drinking water.

### Copper and Lead Sampling

Test for lead and copper are taken from customer taps located throughout the City of Santa Fe. The most recent round of lead and copper testing took place in August 2013. If present, elevated levels of lead and copper are health problems. Exposure to lead is a potential problem for pregnant women and young children. Lead in drinking water is a particulate material and can cause serious health effects and impose environmental hazards. Lead in drinking water is regulated by the U.S. Environmental Protection Agency (EPA) and is reported for the years 2010 through 2013. The results shown in the table below indicate that the level of Copper and Lead in drinking water have not exceeded the MCL.

<table>
<thead>
<tr>
<th>Sample Year</th>
<th>Copper (ppm)</th>
<th>Lead (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>0.3 to 0.4</td>
<td>0.0000</td>
</tr>
<tr>
<td>2011</td>
<td>0.3 to 0.4</td>
<td>0.0000</td>
</tr>
<tr>
<td>2012</td>
<td>0.3 to 0.4</td>
<td>0.0000</td>
</tr>
<tr>
<td>2013</td>
<td>0.3 to 0.4</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

### Nitrate

The City of Santa Fe meets the federal drinking water standard for nitrate (10 mg/L, or 0 ppm). Nitrate levels in Santa Fe drinking water range from 2 to 5 mg/L. "Normal" nitrate levels in drinking water can cause blue baby syndrome. Elevated levels of nitrate in drinking water cause problems for pregnant women and young children. If you are caring for an infant you should ask advice from your health care provider.

### Arsenic

The drinking water standard for arsenic is 10 ppb (µg/L). The City’s drinking water met this standard throughout 2013. Presently occurs naturally in the soil’s crust. When these arsenic-containing rocks, minerals or sediments are exposed, arsenic may become dissolved and leached into groundwater. While our drinking water meets EPA’s standard for arsenic, it does contain small levels of arsenic. The EPA established the standard by considering the health effects of low levels of arsenic, which is known to cause skin problems such as dry skin and一些其他健康问题。ASR is being monitored for all drinking water systems.

<table>
<thead>
<tr>
<th>Sample Year</th>
<th>Arsenic (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>(0.0013 - 0.0023)</td>
</tr>
<tr>
<td>2011</td>
<td>(0.040 - 0.063)</td>
</tr>
</tbody>
</table>

### Total Dissolved Solids

Total dissolved solids are the total amount of dissolved matter that occurs in the water. Levels (SMCLs) may be reported as total dissolved solids. Total dissolved solids, including synthetic and conventional treatment process utilized at the Canyon Road Water Treatment Plant. Levels (SMCLs) may be reported as total dissolved solids. Total dissolved solids, including synthetic and conventional treatment process utilized at the Canyon Road Water Treatment Plant.

### Sulfate

Sulfate is an inorganic anion that is naturally found in water. Sulfate levels (SMCLs) may be reported as total dissolved solids. Total dissolved solids, including synthetic and conventional treatment process utilized at the Canyon Road Water Treatment Plant. Levels (SMCLs) may be reported as total dissolved solids. Total dissolved solids, including synthetic and conventional treatment process utilized at the Canyon Road Water Treatment Plant.


### Table: Water Sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
<th>Location</th>
<th>Treatment</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>City's wells located within the City limits of Santa Fe</td>
<td>groundwater</td>
<td>near the Rio Grande</td>
<td>conventional treatment</td>
<td>good</td>
</tr>
<tr>
<td>Surface water from the Santa Fe River</td>
<td>surface water</td>
<td>United States</td>
<td>advanced treatment</td>
<td>good</td>
</tr>
<tr>
<td>Underground water from the Buckman Wells</td>
<td>groundwater</td>
<td>United States</td>
<td>advanced treatment</td>
<td>good</td>
</tr>
<tr>
<td>Underground water from the Northwest Well Field</td>
<td>groundwater</td>
<td>United States</td>
<td>advanced treatment</td>
<td>good</td>
</tr>
</tbody>
</table>

### Water Quality Report

According to the City of Santa Fe's Water Division, the City's drinking water met all U.S. Environmental Protection Agency (EPA) and State drinking water quality limits. The report contains additional data on the water sources used by the City, water treatment processes, and the results of water quality tests. The report also includes information on the effectiveness of the filtration system and the sources of drinking water are generally protected from contamination. The City was served by four distinct sources of supply in 2013, the sources of which the City's drinking water is taken directly from the Rio Grande. The report contains additional details about where your water comes from, what it contains, and how it compares to standards set by the federal and state regulatory agencies. It provides educational information on contaminants which may be of concern.

### Sources of Supply

The City was served by four distinct sources of supply in 2013. The 13,000 acre Santa Fe Water provides surface water from the Santa Fe River where it is stored in the McQueen and Nichols Reservoir prior to treatment. Surface water from the Santa Fe River and Rio Grande is treated through conventional and advanced treatment processes at the Canyon Road Water Treatment Plant and Buckman Regional Water Treatment Plant (BRWTP), respectively. The City's well field is mostly located in close proximity to the Santa Fe River and consists of 8 active wells located within the City limits of Santa Fe. The Buckman Well Field consists of 13 wells largely in the Rio Grande, approximately 15 miles northwest of Santa Fe. All four sources, treated and used for drinking water, were determined to be susceptible to contamination. The City's drinking water is monitored for various pathogens, including bacteria and viruses. Results are published in the City's annual water quality report. The City's water utility reveals that the utility is well maintained and operated, and the operation of drought water use was generally protected from contamination based on the evaluation of the available information. The susceptibility of all the water systems is “moderate-low.”

### Do I need to take special precautions?

People may be more vulnerable to contaminants in drinking water than the general population, because their immune systems may be particularly at risk from infections. These people should seek medical advice about drinking water from their health care providers. EPA/WHO guidelines recommend that individuals in these groups avoid contact with drinking water that has been chlorinated. EPA/WHO guidelines were developed to protect people who may be more vulnerable to contaminants in drinking water than the general population, including:

- Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons with HIV infection/AIDS or other immune system disorders, some elderly, and infants.
- Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons include:
  - Persons with cancer undergoing chemotherapy.
  - Persons with HIV infection/AIDS or other immune system disorders.
  - Some elderly.
  - Infants.

### Notes:

- EPA considers 50 pCi/L to be the level of concern for beta particles.
- EPA considers 50,000 pCi/L to be the level of concern for alpha particles.
- EPA considers 1,000 pCi/L to be the level of concern for radon-222.
- EPA considers 150 pCi/L to be the level of concern for radon-219.
- EPA considers 1,000 pCi/L to be the level of concern for radon-220.
- EPA considers 20 pCi/L to be the level of concern for radon-222.
- EPA considers 10 pCi/L to be the level of concern for radon-219.
- EPA considers 10 pCi/L to be the level of concern for radon-220.
- EPA considers 1 pCi/L to be the level of concern for radon-222.
- EPA considers 0.1 pCi/L to be the level of concern for radon-219.
- EPA considers 0.01 pCi/L to be the level of concern for radon-220.
- EPA considers 0.001 pCi/L to be the level of concern for radon-222.
- EPA considers 0.0001 pCi/L to be the level of concern for radon-219.
- EPA considers 0.00001 pCi/L to be the level of concern for radon-220.
- EPA considers 0.000001 pCi/L to be the level of concern for radon-222.
- EPA considers 0.0000001 pCi/L to be the level of concern for radon-219.
- EPA considers 0.00000001 pCi/L to be the level of concern for radon-220.
- EPA considers 0.000000001 pCi/L to be the level of concern for radon-222.
- EPA considers 0.0000000001 pCi/L to be the level of concern for radon-219.
- EPA considers 0.00000000001 pCi/L to be the level of concern for radon-220.
- EPA considers 0.000000000001 pCi/L to be the level of concern for radon-222.
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- EPA considers 0.000000000000001 pCi/L to be the level of concern for radon-222.