



Este reporte incluye  
información importante  
sobre el agua para tomar.  
Para asistencia en español,  
favor de llamar al telefono  
(432) 523-4820

Water  
Testing  
Performed  
in 2011

Presented By:  
City of Andrews

# Working *for* YOU

2011 WATER QUALITY REPORT

PWS ID#: TX0020001

# Important Information About Your Drinking Water

The Texas Commission on Environmental Quality (TECQ) has notified the City of Andrews water system that the drinking water being supplied to customers had exceeded the Maximum Contaminant Level (MCL) for arsenic. The U.S. Environmental Protection Agency (U.S. EPA) has established the MCL for arsenic at 10 ppb, based on a running annual average (RAA), and has determined that it is a health concern at levels above the MCL. Analysis of drinking water in your community for arsenic indicates a level of 26 ppb.

This is not an emergency. However, 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.

You do not need to use an alternative water supply. However, if you have health concerns, you may want to talk to your doctor to get more information about how this may affect you. We are working to correct the problem.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For further information contact Bert Lopez at **(432) 523-4820**.

Public Water System ID #0020001.

## Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the U.S. EPA's Safe Drinking Water Hotline at **(800) 426-4791**.

Our drinking water is obtained from groundwater sources. It comes from the Ogallala and Dockum formations.

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.texas.gov/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

Please contact the Drinking Water Protection Team directly at (512) 239-4691 if you have questions regarding your source water assessment.

## Lead/Copper Reporting

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. This water supply 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 two 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://www.epa.gov/safewater/lead>.

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.

## Questions?

For more information about this report, or for any questions relating to your drinking water, please call Bert Lopez or Bo Griffin, Asst. Directors of Utilities, at (432) 523-4820.

## Community Participation

You are invited to participate in our public forum and to voice your concerns about your drinking water. The meeting will take place July 5, 2012, at 9:00 a.m., at City Hall.

## Q & A

**Q: Is the recommended six to eight glasses of water needed each day to maintain good health required to be tap water, or are other drinks okay?**

**A:** Juice, milk, and soft drinks are almost all water, so they do count toward the required total daily fluid intake. Nutritionists often recommend tap water, however, because some other beverages contain chemicals like caffeine and alcohol that cause one to lose water. These are called diuretics, and thus, they do not help maintain fluid balance as well as other drinks. Tap water does not have these chemicals, so it is a safe recommendation, although other non-alcoholic drinks, including caffeine-free soft drinks, are fine. *NOTE: Decaffeinated coffee and tea do have some caffeine in them, so they are not as good as caffeine-free drinks.*

Older people sometimes do not drink enough liquids because their thirst mechanism is not strong enough. Thirst should not be an indicator of the daily need for liquids. Consumption of salty foods, diseases such as diabetes, and various medications all can affect a person's thirst sensation. Everyone needs fluids, whether they are thirsty or not. Finally, in proportion to body weight, babies need more fluids than adults. Consult with your doctor as to the water needs of your baby.

**Q: I have seen work crews cleaning water mains and the water they flush out looks terrible. How can the water be safe if the pipes are so dirty?**

**A:** Almost all water pipes have a thin film of rust and harmless microbes on the inside. Experience has shown that this thin film causes no problems. Buildup of this material may, however, cause problems such as clogging of fixtures, causing the tap water to look bad or using up the disinfectant in the water as it passes through the pipes. Water suppliers have a regular program of flushing and cleaning their distribution pipes. When they remove all of this material from the walls of several miles of a pipe and it comes out a fire hydrant all at once, it looks worse than it really is. If you watch the workers do this, you will notice that the water clears up rather quickly.

# Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

## Inorganic Contaminants

| Substance (Unit of Measure)         | Year Sampled | MCL [MRDL] | MCLG [MRDLG] | Amount Detected | Range Low-High | Violation | Typical Source  |
|-------------------------------------|--------------|------------|--------------|-----------------|----------------|-----------|---|
| Arsenic (ppb)                       | 2011         | 10         | NA           | 26              | NA             | Yes       | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes                    |
| Barium (ppm)                        | 2011         | 2          | 2            | 0.0369          | NA             | No        | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| Chlorine (ppm)                      | 2011         | [4]        | [4]          | 0.93            | 0.41–4.0       | No        | Water additive used to control microbes   |
| Chromium (ppb)                      | 2011         | 100        | 100          | <0.0100         | NA             | No        | Discharge from steel and pulp mills; Erosion of natural deposits  |
| Fluoride (ppm)                      | 2011         | 4          | 4            | 4.47            | 0.13–4.62      | Yes       | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate (ppm)                       | 2011         | 10         | 10           | 2.32            | NA             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| Selenium (ppb)                      | 2011         | 50         | 50           | 0.0285          | NA             | No        | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines                          |
| TTHMs [Total Trihalomethanes] (ppb) | 2011         | 80         | NA           | 3               | NA             | No        | By-product of drinking water chlorination   |

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

## Lead and Copper

| Substance (Unit of Measure) | Year Sampled | AL  | MCLG | Amount Detected (90th %tile) | Sites Above AL/Total Sites | Violation | Typical Source   |
|-----------------------------|--------------|-----|------|------------------------------|----------------------------|-----------|--|
| Copper (ppm)                | 2011         | 1.3 | 1.3  | 0.252                        | 0/20                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb)                  | 2011         | 15  | 0    | 1.3                          | 1/20                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits                                   |

## Maximum Residual Disinfectant Level

| Year | Disinfectant | Average Level | Minimum Level | Maximum Level | MRDL | MRDLG | Unit of Measure | Source of Chemical                    |
|------|--------------|---------------|---------------|---------------|------|-------|-----------------|---------------------------------------|
| 2011 | Chlorine     | .98           | .35           | 1.87          | 4.0  | <4.0  | ppm             | Disinfectant used to control microbes |

### DEFINITIONS

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MCL (Maximum Contaminant Level):** 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):** 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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

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

**NA:** Not applicable.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

# Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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 can acquire naturally occurring minerals, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which may also come from gas stations, urban stormwater runoff, and septic systems;

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

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

# Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

- Check your toilets for leaks by putting a drops of food coloring in the tank. Watch few minutes to see if the color shows up in bowl. It is not uncommon to lose up to gallons a day from an invisible toilet leak. and you save more than 30,000 gallons a year
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after minutes. If it moved, you have a leak.

# Naturally Occurring Substances

The City of Andrews has naturally occurring fluoride and arsenic levels in the drinking water. The amount of each exceeds the maximum contaminant levels (MCL). The fluoride and arsenic violations occurred from 1/1/2009 –12/31/2009. The WATER QUALITY HAS NOT CHANGED. However, recently the U.S. EPA lowered its standard for arsenic resulting in the City of Andrews being out of compliance.

Due to these high levels of natural minerals, the City of Andrews provides bottled water 24 hours a day—free of charge—at our water station located next to City Hall.

Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

# Taps vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp).