



ANNUAL

# WATER QUALITY REPORT

*Water testing performed in 2009*



*Presented By:*

**TRAVIS COUNTY WATER  
CONTROL AND IMPROVEMENT  
DISTRICT NO. 17**

PWS ID#: TX2270027

## Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past year have presented many of us with challenges we could not have imagined, including one of the worst droughts in history. In spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

## 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.

## Is It Safe to Drink Water from a Garden Hose?

Substances used in vinyl garden hoses to keep them flexible can get into the water as it passes through the hose. These chemicals are not good for you nor are they good for your pets. Allow the water to run for a short time in order to flush the hose before drinking or filling your pets' drinking containers. There are hoses made with "food-grade" plastic that will not contaminate the water. Check your local hardware store for this type of hose.

## Community Participation

We want our customers to be informed about their water utility. You are invited to attend regular board of directors meetings on the third Thursday of each month at 6 p.m. at the District Office at 3812 Eck Lane. Contact us by writing to this address:

3812 Eck Lane Austin, TX 78734.

Visit our Web site at [www.wcid17.org](http://www.wcid17.org).

## Lead and Drinking Water

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. Travis County Water District 17 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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Questions?

For more information about this report, or for any questions relating to your drinking water, please call Debbie Gernes, General Manager, at (512) 266-1111 ext. 13 (e-mail [dgermes@wcid17.org](mailto:dgermes@wcid17.org)) or Thurman Carlisle, Water Operations Supervisor, at (512) 801-3445 (e-mail [tcarlisle@wcid17.org](mailto:tcarlisle@wcid17.org)).

## Where Does My Water Come From?

Water District 17 customers are fortunate because we enjoy an exceptionally clean surface water supply from Lake Travis. The Colorado River watershed that feeds Lake Travis reaches many miles upstream, passing through agricultural fields as well as urban areas. The raw water is processed at the Eck Lane Water Treatment Plant, where it is filtered through state-of-the-art microfiltration membranes. Microfiltration rejects particles larger than 0.075 microns and can filter out *Giardia* cysts, *Cryptosporidium*, bacteria, and about 68 percent of viruses. The water is then treated with chlorine and ammonia to disinfect and remove any residual harmful contaminants, and a small amount of fluoride is added to prevent tooth decay. Water quality is monitored continuously to ensure it is within standards for low turbidity and proper disinfection levels.



## Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) is the state water regulatory agency, and they completed a source water assessment (SWA) for Lake Travis in 2003. The SWA is a report on the susceptibility of public drinking water systems to 227 drinking water contaminants. The results include a high, medium, or low rating for each contaminant, as well as a list of potential sources of contamination. A copy of this report is available at the District Office at 3812 Eck Lane. You can access more information on the Internet at [www.tceq.state.tx.us/nav/util\\_water/protectaquifers.html](http://www.tceq.state.tx.us/nav/util_water/protectaquifers.html).

## Substances That Might 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.

## What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at [www.epa.gov/safewater/crossconnection.html](http://www.epa.gov/safewater/crossconnection.html). You can also call the Safe Drinking Water Hotline at (800) 426-4791.

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is the total volume of freshwater used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.



According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to [www.h2oconserve.org](http://www.h2oconserve.org), or visit [www.waterfootprint.org](http://www.waterfootprint.org) to see how the water footprints of other nations compare.

## What Are PPCPs?

When cleaning out your medicine cabinet, what do you do with your expired pills? Many people flush them down the toilet or toss them into the trash. Although this seems convenient, these actions could threaten our water supply.

Recent studies are generating a growing concern over pharmaceuticals and personal care products (PPCPs) entering water supplies. PPCPs include human and veterinary drugs (prescription or over-the-counter) and consumer products, such as cosmetics, fragrances, lotions, sunscreens, and house cleaning products. Over the past five years, the number of U.S. prescriptions increased 12 percent to a record 3.7 billion, while nonprescription drug purchases held steady around 3.3 billion. Many of these drugs and personal care products do not biodegrade and may persist in the environment for years.

The best and most cost-effective way to ensure safe water at the tap is to keep our source waters clean. Never flush unused medications down the toilet or sink. Instead, check to see if the pharmacy where you made your purchase accepts medications for disposal, or contact your local health department for information on proper disposal methods and drop-off locations. You can also go on the Web at [www.Earth911.com](http://www.Earth911.com) to find more information about disposal locations in your area.

## 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.

| REGULATED SUBSTANCES  |              |            |              |                 |                |           |   |
|---|--------------|------------|--------------|-----------------|----------------|-----------|---|
| SUBSTANCE (UNIT OF MEASURE)                                 | YEAR SAMPLED | MCL [MRDL] | MCLG [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE  |
| Chloramines (ppm)   | 2009         | [4]        | [4]          | 3.13            | 0.5–3.6        | No        | Water additive used to control microbes   |
| Fluoride (ppm)  | 2009         | 4          | 4            | 1.21            | 0.3–1.41       | No        | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Haloacetic Acids [HAA] (ppb)                                | 2009         | 60         | NA           | 32.14           | 29.3–37.5      | No        | By-product of drinking water disinfection   |
| Nitrite as N (ppm)  | 2009         | 1          | 1            | 0.18            | NA             | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| TTHMs [Total Trihalomethanes] (ppb)                         | 2009         | 80         | NA           | 78.28           | 54.2–104.0     | No        | By-product of drinking water chlorination   |
| Total Organic Carbon (ppm)                                  | 2009         | TT         | NA           | 4.19            | 3.33–5.54      | No        | Naturally present in the environment  |
| Turbidity <sup>1</sup> (NTU)                                | 2009         | TT         | NA           | 0.12            | 0.07–0.12      | No        | Soil runoff   |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2009         | TT         | NA           | 100             | NA             | No        | Soil runoff   |

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

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL  | MCLG | AMOUNT DETECTED (90TH% TILE) | SITES ABOVE AL/TOTAL SITES | VIOLATION | TYPICAL SOURCE   |
|-----------------------------|--------------|-----|------|------------------------------|----------------------------|-----------|--|
| Copper (ppm)                | 2007         | 1.3 | 1.3  | 0.527                        | 0/30                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb)                  | 2007         | 15  | 0    | 6.7                          | 0/30                       | No        | Corrosion of household plumbing systems; Erosion of natural deposits                                   |

| SECONDARY SUBSTANCES         |              |         |      |                 |                |           |                                       |
|------------------------------|--------------|---------|------|-----------------|----------------|-----------|---------------------------------------|
| SUBSTANCE (UNIT OF MEASURE)  | YEAR SAMPLED | MCL     | MCLG | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE                        |
| Total Dissolved Solids [TDS] | 2009         | 500     | NA   | 273             | NA             | No        | Runoff/leaching from natural deposits |
| pH (Units)                   | 2009         | 6.5–8.5 | NA   | 7.64            | 7.46–7.85      | No        | Naturally occurring                   |

| UNREGULATED AND OTHER SUBSTANCES <sup>2</sup> |              |                 |                |                     |
|---|--------------|-----------------|----------------|---------------------|
| SUBSTANCE (UNIT OF MEASURE)                   | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH | TYPICAL SOURCE      |
| Alkalinity (ppm)                              | 2009         | 170.7           | 170.0–171.6    | Naturally occurring |
| Chloride (ppm)                                | 2009         | 37              | NA             | Naturally occurring |
| Hardness <sup>3</sup> (ppm)                   | 2009         | 191.18          | 176.7–195.2    | Naturally occurring |
| Sodium (ppm)                                  | 2009         | 20.4            | NA             | Naturally occurring |
| Sulfate (ppm)                                 | 2009         | 26.0            | NA             | Naturally occurring |

| MICROBIOLOGICAL SAMPLING RESULTS    |              |                             |      |                 |
|-------------------------------------|--------------|-----------------------------|------|-----------------|
| SUBSTANCE (UNIT OF MEASURE)         | YEAR SAMPLED | MCL                         | MCLG | AMOUNT DETECTED |
| Total Coliform (% positive samples) | 2009         | 5% positive monthly samples | 0    | Not Detected    |

<sup>1</sup> Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

<sup>2</sup> Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

<sup>3</sup> District 17 water is considered moderately hard to hard: 176.7–195.2 converts to 10.3–11.4 grains per gallon with an average of 10.9 grains per gallon.

## 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.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.