



Annual **WATER QUALITY REPORT**

Reporting Year 2012



Presented By
**Travis County Water Control and
Improvement District No. 17**

PWS ID#: TX2270027

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (512) 266-1111.

There When You Need Us

We are once again proud to present our annual water quality report, covering all testing performed between January 1 and December 31, 2012. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the TCEQ has a Web site (www.tceq.com) that provides complete and current information on water issues in Texas, including valuable information about our watershed.

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% 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.

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.

Lead in Home Plumbing

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. 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.

Fluoride Note

Water District 17 fluoridates drinking water to the level recommended by the American Dental Association of 0.7 milligrams per liter (parts per million or ppm). Because of their high fluid intake relative to body weight, infants consistently consuming formula mixed with tap water may possibly ingest fluoride at above the recommended level. The Center for Disease Control recommends that you prepare infant formula with distilled or demineralized water. Parents are urged to speak with their pediatrician about the type of water appropriate for the formula they are using.

About Our Violation

There were 492 bacteriological samples collected in 2012; 3 samples in June were positive. All repeat samples were negative. Since 3 samples were positive in June, the MCL (5% positive samples) was violated in that month. Public notice was issued.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

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 dgernes@wcid17.org) or Thurman Carlisle, Water Operations Supervisor, at (512) 801-3445 (e-mail tcarlisle@wcid17.org).

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.texas.gov/drinkingwater/SWAP.

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, beginning at 6 p.m. at the District Office at 3812 Eck Lane. Contact us by writing to 3812 Eck Lane, Austin, Texas 78734.

Please visit our Web site at www.wcid17.org.

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 Safe Drinking Water Hotline at (800) 426-4791.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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 <http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm>. You can also call the Safe Drinking Water Hotline at (800) 426-4791.



What is the typical per-day water usage?

While usage varies from community to community and person to person, on average, Americans use 183 gallons of water a day for cooking, washing, flushing, and watering purposes. The average family turns on the tap between 70 and 100 times daily. About 74% of home water usage occurs in the bathroom, about 21% in the laundry room, and about 5% in the kitchen.

Why do water pipes tend to break in winter?

Liquids generally contract when frozen and become more dense; however, the unique qualities of water cause it to expand by up to 9% when it freezes. That is why water pipes burst when temperatures reach the freezing mark.

How much water is used to create the food we eat each year?

The average American consumes 1,500 pounds of food each year; 1,000 gallons of water are required to grow and process each pound of that food. Thus, 1.5 million gallons of water is invested in the food eaten annually by just one person! This 200,000-plus cubic feet of water per person is enough to cover a football field four feet deep.

Is it okay to use hot water from the tap for cooking and drinking?

No, ALWAYS use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These harmful substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time.

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7 PC (which is the code for BPA). You could also consider using stainless steel or aluminum containers that have BPA-free liners.

How much water is used in the shower?

A 10-minute shower can take 25 to 50 gallons of water. High-flow shower heads allow a flow of 6 to 10 gallons a minute. Low-flow shower heads can cut the rate in half without reducing pressure.

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)	2012	[4]	[4]	3.16	2.92–3.50	No	Water additive used to control microbes
Fluoride (ppm)	2012	4	4	0.74	0.69–0.92	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2012	60	NA	12.42	7.7–18.2	No	By-product of drinking water disinfection
Nitrate (ppm)	2012	10	10	0.25	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2012	80	NA	26.65	12.6–41.9	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2012	More than 5% positive monthly samples	0	7.5	NA	Yes	Naturally present in the environment
Total Organic Carbon (ppm)	2012	TT	NA	3.8	3.4–4.3	No	Naturally present in the environment
Turbidity ¹ (NTU)	2012	TT<1 NTU	NA	0.04	0.03–0.04	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT=95% of samples<0.3 NTU	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	AMOUNT DETECTED (90TH%ILE)		SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE	
		AL	MCLG				
Copper (ppm)	2010	1.3	1.3	1.1	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2010	15	0	3.2	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2012	250	NA	49	NA	No	Runoff/leaching from natural deposits
pH (Units)	2012	6.5–8.5	NA	7.79	7.63–7.94	No	Naturally occurring
Total Dissolved Solids [TDS] (ppm)	2012	500	NA	283	NA	No	Runoff/leaching from natural deposits

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Alkalinity (ppm)	2012	180.06	168.3–192.4
Hardness ² (ppm)	2012	190.29	183.8–198.5
Sodium (ppm)	2012	32	NA
Sulfate (ppm)	2012	25.6	NA

¹Turbidity 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.

²District 17 water is considered moderately hard to hard. The range of 183.8–198.5 parts per million converts to 10.7–11.6 grains per gallon with an average of 11.1 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.

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.