Your Drinking Water Quality

1998 Report

dallas water utilities
city of dallas

Customer Service 214/651-1441
Water Quality Information 214/670-0900

En Español

Este documento contiene información importante sobre su agua potable.
Para obtener una copia de esta información en Español,
por favor llame al número 214/651-1441.

Published July 1999

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Your participation is welcome

Dallas Water Utilities (DWU) is a not-for-profit department of the City of Dallas and is governed by the Dallas City Council. The City Council meets weekly on Wednesdays. For information about meetings and how to register as a speaker, contact the City Secretary's office at 214/670-3738. Following are other helpful telephone numbers:

- Questions or concerns about water quality - 214/670-0900;
- To request a speaker for your group - 214/670-4022;
- Questions about your bill - 214/651-1441;
- For inquiries about public participation in DWU projects - 214/670-4297;
- For brochures on water conservation or pollution prevention - 214/670-3155.

Free water treatment plant tours are available for groups on weekdays during the daytime. Tours are restricted as to size, age and number of participants. Please call in advance to schedule (214/670-0900).

This report was mailed to all Dallas Water Utilities customers. The report is available in Dallas public libraries and recreation centers and is on the City of Dallas website www.ci.dallas.tx.us

If you know someone who did not receive a copy, we'll be happy to send one.

For additional copies or to comment on this report, call 214/670-3155 or contact:
DWU Community Relations,
City Hall, 1500 Marilla, 5AS
Dallas, TX 75201

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City of Dallas

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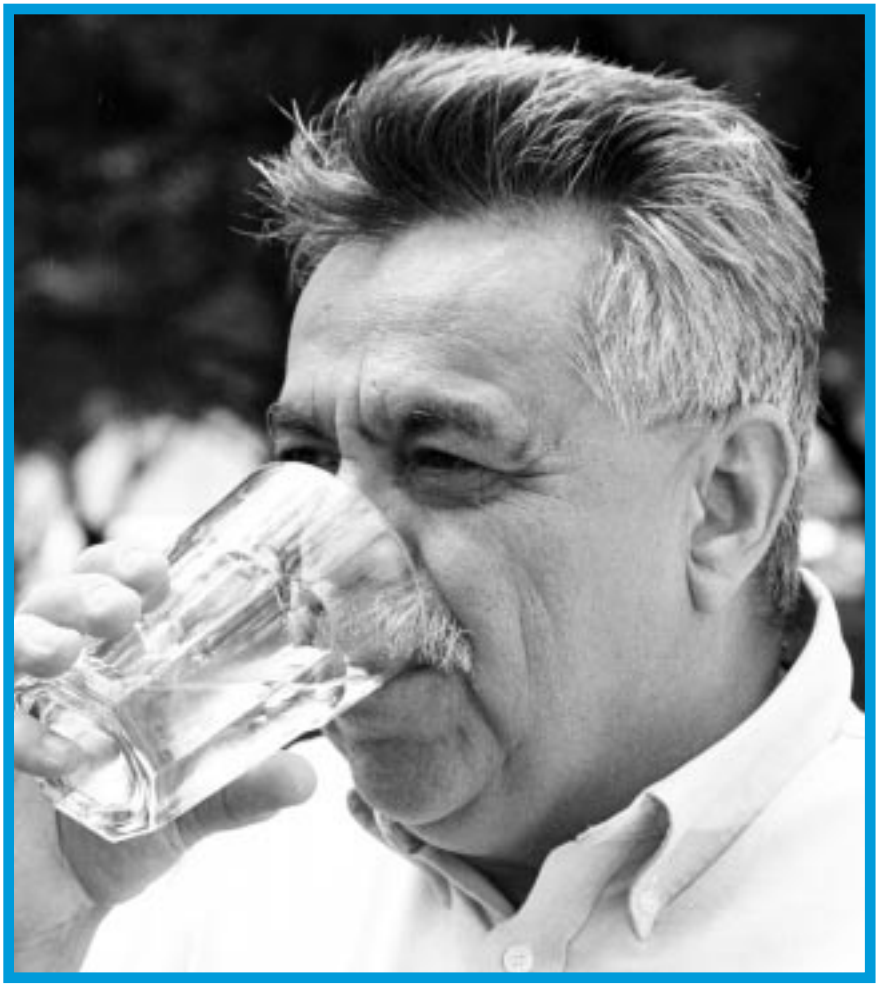


Dallas water quality remained high in 1998

When you drink Dallas tap water, you're drinking clean, high quality water. Dallas water meets or is better than all state and federal water quality requirements. Texas Natural Resource Conservation Commission rates Dallas water a "Superior Public Water Supply," the highest rating given by the State of Texas. In September 1997, Region 6 U.S. EPA gave Dallas the Environmental Excellence Award for Public Water Supply, meaning that when you drink Dallas water, you're drinking some of the best water in our five-state region. This is the second time that Dallas has achieved this distinction. The first was in 1991.

Dallas water continued to meet high quality standards in 1998, despite record customer water use during the hot, dry summer. Throughout weeks of unusually high customer demands in June and July, Dallas never had to restrict water delivery to its almost 1.9 million customers in Dallas and 19 wholesale customer cities. On July 30, 1998, customers set a one-day water-use record of 708.5 million gallons.

As you read this report, you will learn about where Dallas water comes from, how you can help protect your water quality, what is in Dallas water and answers to commonly-asked questions. If you need more information, please call our water quality information line at 214/670-0900.

Filters are being rehabilitated at the Eastside Water Treatment Plant.

Dallas continues to improve water quality

In 1998, Dallas was recognized for participation in two voluntary programs to improve water treatment. In June, Dallas' Elm Fork Water Treatment Plant was one of only 20 in the nation to receive the U.S. EPA Director's Certificate under the national Partnership for Safe Water Program. In September, the Elm Fork plant was recognized for achievements in the Texas Optimization Program (TOP), sponsored by the Texas Natural Resource Conservation Commission. Dallas was the third water system and the first large system in the state to receive the TOP award.

Both programs focus on improving treatment plant operations to ensure the best possible performance and both involve outside experts in reviewing treatment plant operations. Dallas is now working toward certifying its other two water treatment plants under these programs.

Dallas undertook the following capital improvement projects in 1998 to improve and upgrade water treatment plant performance:

- Phase one of improvements at Eastside Water Treatment Plant, including filter rehabilitation;
- Process improvements at Bachman Water Treatment Plant;
- Sludge lagoon improvements at Elm Fork Water Treatment Plant;
- Completion of an extensive water quality testing effort under the federal Information Collection Rule.

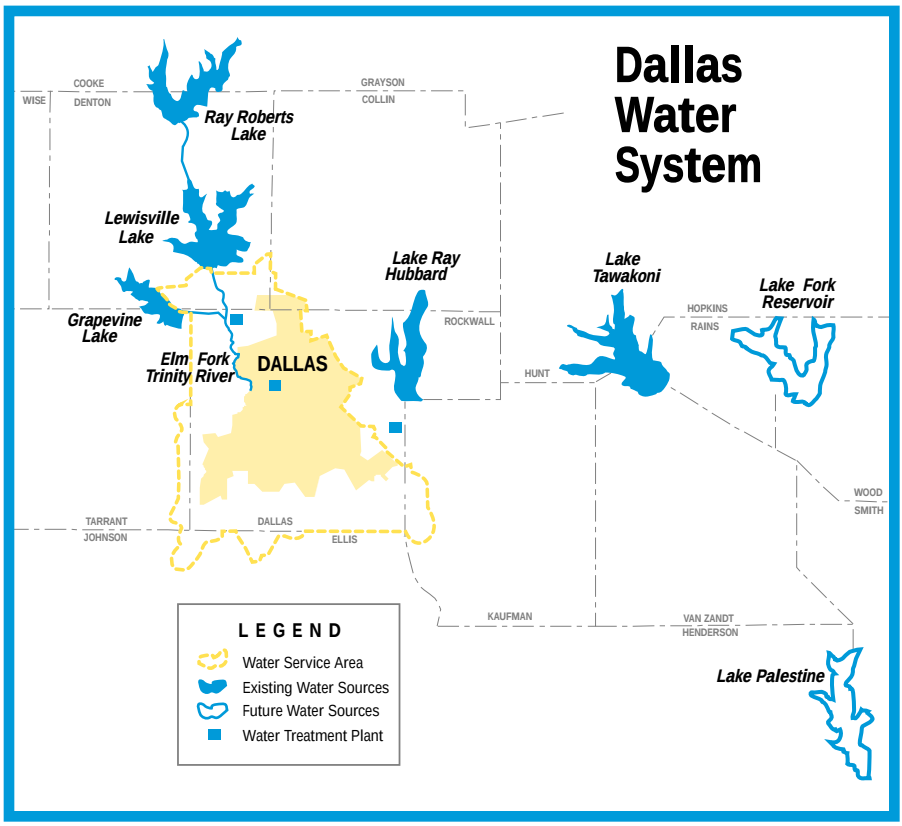
In addition, Dallas began other projects to improve the water system:

- Renovation of South Cliff and Greenville Pump Stations;
- Forney Pump Station improvements;
- Long Range Water Supply Plan update;
- Risk Management Plan (Accidental Release Prevention for chemical safety);
- Study of dam safety at White Rock Lake;
- Walnut Hill pipeline to increase delivery capacity.

Your water sources

Dallas uses surface water from six sources: the Elm Fork of the Trinity River and Lakes Ray Roberts, Lewisville, Grapevine, Ray Hubbard and Tawakoni. In addition, Dallas has water rights in Lakes Fork and Palestine to meet future needs. Pipelines will need to be constructed to connect these two lakes to the Dallas system. The City of Dallas regularly reviews its Long Range Water Supply Plan to address issues such as future sources of water. This planning, along with wise water use, will ensure an adequate supply of water for future needs.

DWU has an active Watershed Management Program that performed more than 8,000 tests on the water quality in the rivers, streams and reservoirs in 1998. In addition, the City of Dallas' storm water quality and industrial pretreatment programs help prevent pollution. As water travels over the surface of the land, it dissolves naturally occurring minerals and can be polluted by animals or human activity. The presence of any of these pollutants in the untreated water does not necessarily pose a health risk in your drinking water. The Texas Natural Resource Conservation Commission will be reviewing all of Texas' drinking water sources. This source water assessment process will be completed in three years. Dallas' current treatment techniques have proven effective in removing these pollutants. The City of Dallas will continue to commit the resources needed to ensure proper treatment and delivery of high quality water to its customers.



DWU chemists conduct an average of 50,000 tests per month to ensure water quality.

How your drinking water is treated

Dallas' water purification is a process of chemical treatment, settling, filtration and disinfection.

Water treatment chemicals including lime, ferric sulfate, chloramines (chlorine and ammonia), powdered activated carbon, polymers, ozone, carbon dioxide and fluoride are added to water to remove impurities, kill harmful bacteria, eliminate tastes and odors and help prevent tooth decay.

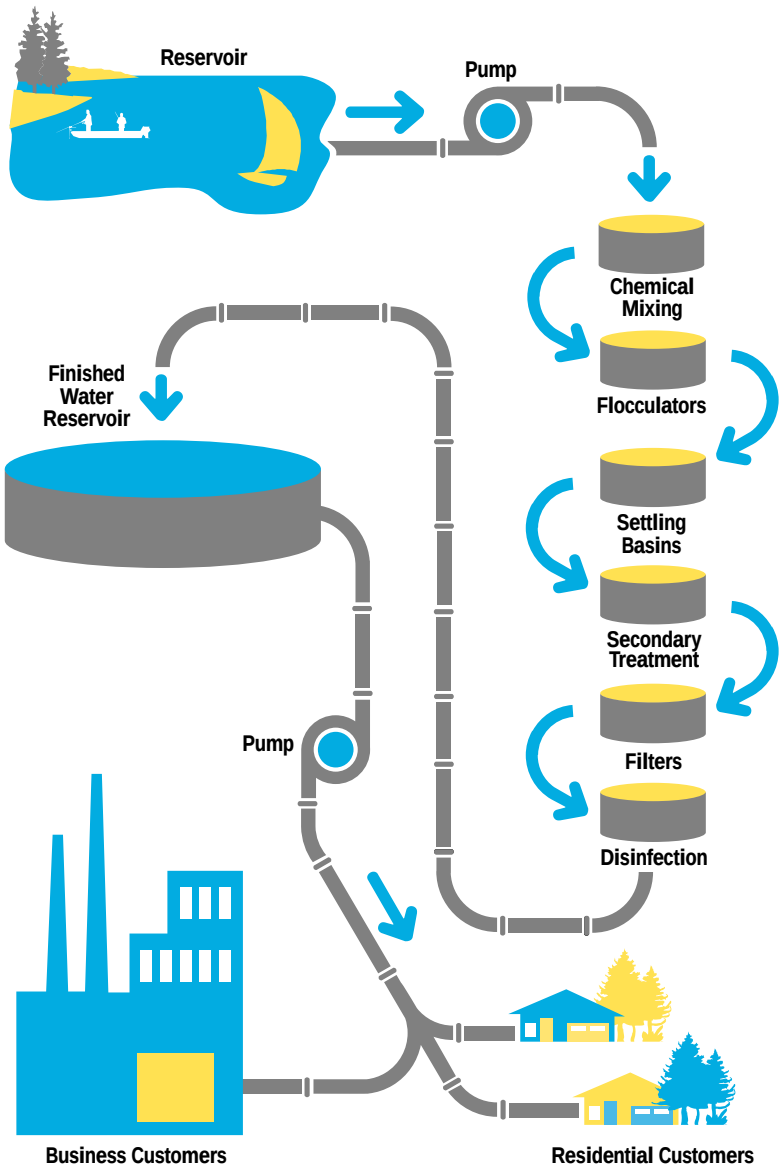
After chemicals are rapidly mixed in the water, the water moves to "flocculators," basins where large, slowly moving paddles stir the water to keep chemicals in suspension while they do their job. Most of the unwanted material in untreated water consists of millions of tiny particles, so light they float or are in suspension. Under the gentle mixing, the chemicals cause the small particles to group together and grow in size, large and heavy enough to sink.

The water next passes into a settling basin where it flows slowly for four to eight hours to allow the enlarged particles, silt and other suspended matter to settle to the bottom and out of the water.

The cycle is repeated in a secondary treatment phase — the addition of chemicals, mixing and final settling. At this point, most of the chemicals added to the water have settled out, taking with them the impurities that were originally in the untreated water. In fact, although it appears that substances are being added to the water, the reverse is actually happening. The purified water contains about 25 percent fewer dissolved minerals than does the untreated water.

The last major step in purification is filtration, the passing of water through filters consisting of a bed of anthracite coal, sand and gravel. As the water trickles through, any remaining small suspended particles are caught in the filters and removed.

Disinfection to kill bacteria takes place in one of two ways: at the Bachman and Eastside Water Treatment Plants, a combination of chlorine and ammonia (called chloramines) is used; the Elm Fork plant uses state-of-the-art ozone disinfection along with chloramines. Dallas uses these methods to lessen the formation of trihalomethanes (THMs) and other by-products of chlorine disinfection.



Taste and odor

All water has its own unique taste and odor characteristics. DWU, like many other water suppliers, occasionally experiences taste and odor changes. In the summer and early fall, microscopic organisms, such as algae, in area lakes occasionally give water an earthy taste and odor. The odor may be more noticeable in hot water from your pipes. Temperature change and excessive rainfall and flooding can also alter the taste of the water. You may detect a difference in taste after returning home from an extended trip. This is caused when the water is stored in the house plumbing for a long time. The taste should return to normal. These changes do not affect the safety of the water.

Questions and answers

Q. Why does the water sometimes look brown or yellow?

A. Often your water is discolored because of main breaks and repairs. The color comes from iron or mineral deposits inside the pipe that become dislodged during the repairs. Home plumbing may also be the cause. If discolored water appears frequently, or is usually the first water drawn in the morning, or occurs only in one section of the house, it is probably caused by the home plumbing. If it is caused by work on water mains, wait until the work is completed and then run the faucet until the water is clear.

Q. Is chlorine used in my water?

A. Dallas uses chlorine and ammonia together to form chloramines to kill germs and to maintain a disinfection residual in the distribution system. Dallas uses chloramines instead of chlorine alone because chlorine can react with organic matter in water to create THMs (trihalomethanes), which are suspected of being factors in causing some forms of cancer and birth defects. Dallas water has levels of THMs below the limits set by state and federal governments.

Q. Is Dallas water hard or soft?

A. Hardness refers to the calcium and magnesium content. Dallas' water hardness is considered moderate. In 1998, the total hardness in Dallas water ranged from 80 to 100 parts per million (that's like 80 to 100 ounces of salt in 32 tons of potato chips).

Q. Is there lead in my water?

A. Dallas' water purification plants send lead-free water to customers. More than 20 years ago, Dallas began eliminating lead service lines and pipes that could leach lead into the water. Also, Dallas' water treatment process employs a technique designed to prevent leaching of lead into water from solder joints. Your home plumbing may have lead pipes or solder. If you think you have a lead problem, let the water run for about a minute if the tap has not been used for three or more hours (save this water and use it to water plants or for some other household activity); letting the water run may not get all of the lead out of the water, but it will improve the situation; insist on lead-free materials when having plumbing work performed in the home. Call DWU at 214/670-0900 for a free water test.

Q. Why does my water appear cloudy or milky at times?

A. Cloudy water is often caused by dissolved oxygen being released from the water. Cold water can hold more oxygen than warm water. Water saturated with oxygen will release the oxygen as it warms. This release makes the water appear milky or cloudy, but it does not affect the safety of the water. The cloudiness usually will disappear in about 30 seconds.

Q. How much fluoride is in my water?

A. Fluoride occurs naturally in our water at a concentration of 0.3 to 0.4 parts per million. A 1966 referendum passed by Dallas citizens led to an action to add to and control the existing fluoride level as a dental health measure. We now maintain a typical level of 0.8 parts per million, which is within the guidelines recommended by the U.S. EPA, the Texas Natural Resource Conservation Commission and the American Dental Association.

Q. Do I need to use bottled water or a home water filter?

A. No, not in Dallas. If you have special needs, then you may want to talk to your doctor about those alternatives. DWU provides services vital to the health and safety of Dallas citizens and our customers, and we take our job seriously. Dallas water meets or is better than all standards set by the state and federal governments. To ensure this high quality, an average of 50,000 tests are performed on Dallas water every month.

Q. What happens after water goes down the drain?

A. "Used" water goes through your sewer pipes to the wastewater collection system, which carries the water to a wastewater treatment plant. Wastewater is treated to strict environmental standards before it is released to the Trinity River. From there, it flows downstream. Dallas' wastewater treatment plants are recognized for high quality treatment.

Water quality monitoring results

As the charts on pages 10 and 11 show, the levels of constituents in Dallas water meet or are better than the amounts allowed by law. The charts list constituents detected in Dallas drinking water in 1998 and the amounts allowed by the state and federal governments (maximum contaminant level). Definitions of terms are listed below.

Dallas regularly tests drinking water for more than 180 constituents. About 50,000 tests each month are conducted on Dallas water to ensure that it is clean and meets all water quality requirements. To request a complete list of the constituents tested for and the results, please write and send a self-addressed, stamped business-size envelope to Dallas Water Utilities, Community Relations, 1500 Marilla, Room 5AS, Dallas, TX 75201.

Terms used on pages 10 and 11:

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

Maximum Contaminant Level (MCL) - The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - 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.

mrem/year - Millerems per year (measure of radiation absorbed by the body).

ND - Not detected.

Nephelometric Turbidity Units (NTU) - Measure of turbidity in water.

ppm - Parts per million. One part per million equals one packet of artificial sweetener sprinkled into 250 gallons of iced tea.

pCi/l - Pico-curies per liter (a measure of radioactivity).

ppb - Parts per billion. One part per billion is equal to one packet of artificial sweetener sprinkled into an Olympic-size swimming pool.

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

Turbidity - A measure of the clarity of drinking water. The lower the turbidity, the better.

Unregulated Characteristics*

Detected Inorganic Contaminants			
Constituent	Amount Detected Average	Range	Possible Source
Sodium (ppm)	20	14-40	Natural constituent
Total Hardness (ppm)	98	70-155	Natural constituents
Total Alkalinity (ppm)	53	24-83	Natural constituent
Detected Disinfection By-Products (DBP's)			
Total Haloacetic Acid** (HAA5) Annual Running Average (ppb) in Distribution System	45	16-72	By-product of drinking water chlorination
Bromate (ppb)**	8	6-10	Ozonation by-product

** Unregulated characteristics do not have MCL or MCLG at this time.*

*** Results pending EPA confirmation.*

Regulated Characteristics

Constituent	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Amount Detected Average	Amount Detected Range	Possible Source
Detected Inorganic Contaminants					
Barium (ppm)	2	2	0.02	0.015 - 0.025	Erosion of natural deposits; Discharge of drilling wastes or metal refineries
Fluoride (ppm)	4	4	0.75	0.4 - 1.1	Water additive to promote strong teeth
Lead (ppb)	0	AL = 15	3	ND - 9	Corrosion of household plumbing
Copper (ppm)	1.3	AL = 1.3	0.225	ND - 0.60	Corrosion of household plumbing
Nitrate as Nitrogen (ppm)	10	10	0.51	0.41 - 0.56	Runoff from fertilizer use; Leaching from septic tanks, sewage, erosion of natural deposits
Detected Organic Contaminants					
Atrazine (ppb)	3	3	0.8	0.70 - 0.92	Herbicide runoff
Simazine (ppb)	4	4	0.05	ND - 0.1	Herbicide runoff
Detected Microbial Contaminants					
Total Coliform Bacteria	0	5% of monthly samples	0.3%	0% - 1.5%	Naturally present in the environment
Detected Radioactive Contaminants					
Beta Emitters (pCi/l)†	0	50	4.3	ND - 4.8	Decay of natural and man-made deposits
Disinfection By-products					
Total Trihalomethanes (ppb)	N/A	100*	57	4 -101**	By-product of drinking water chlorination
Treatment Requirements					
Turbidity - plants effluents, NTU	N/A	TT AL = 0.5	0.09	0.05 - 0.20	Soil runoff

† 50 pCi/l = 4 mrem/year

** MCL is based on average of four quarterly samples in the distribution system.*

*** Range is based on all individual samples. Only one sample had a reading of 101.*

All drinking water may contain contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1/800/426-4791).

In order to ensure that tap water is safe to drink, U.S. EPA prescribes regulations which limit 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.

Special notice for the elderly, infants, cancer patients, people with HIV/AIDS and other immune problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1/800/426-4791).

Cryptosporidium

During 1998, Dallas continued monthly testing for cryptosporidium in both untreated and treated water. DWU began monitoring for cryptosporidium in 1993. It has been found only in the untreated water supply. Cryptosporidium has not been found in Dallas treated drinking water. To protect your drinking water, Dallas works to protect the watershed from contamination and optimizes treatment processes. Although Dallas' water treatment process removes cryptosporidium, immuno-compromised persons should consult their doctors regarding appropriate precautions to take to avoid infection.

Cryptosporidium is a tiny intestinal parasite found naturally in the environment. It is spread by human and animal waste. If ingested, it can cause flu-like symptoms. Some of the ways cryptosporidium can be spread include drinking contaminated water, eating contaminated food that is raw or undercooked, exposure to the feces of infected individuals or animals (such as changing diapers without washing hands afterward), or exposure to contaminated surfaces. Not everyone exposed to the organism becomes ill.

To request more information on cryptosporidium, please call the U.S. EPA's Safe Drinking Water Hotline (1/800/426-4791).

Preventing pollution can help protect water quality. Pictured: Lake Lewisville.

How to protect your water quality

You can protect our untreated water resources:

- Report illegal dumping;
- Use the least toxic alternatives for managing pests and diseases in landscapes;
- Follow package directions when applying pesticides, herbicides and fertilizers;
- Do not apply pesticides or fertilizers when rain is expected;
- Recycle or properly dispose of toxic chemicals in your home. For more information on free drop-off locations for household chemicals, call the Dallas Area Household Hazardous Waste Network at 214/904-3017.

You can protect the water after it reaches you:

When Dallas water reaches your home, it is clean and meets or is better than all state and federal water quality requirements. But without proper precautions, water can be contaminated if a sudden pressure drop in the pipes causes contaminated water to be pulled from your home or yard into your plumbing. If this happens, you could contaminate the water in your home and possibly your neighbors' homes.

An air gap between faucet and dirty water will prevent dirty water entering clean water pipes.

To protect water quality once it reaches you, take the following steps:

- Do not leave a garden hose connected to a faucet with the other end submerged in a swimming pool, bucket, dog's bath water . . .anything.
- Keep an air gap between your kitchen or bathroom faucet and the water in the sink. Do not attach a hose to your indoor faucet with the other end submerged in the sink or tub.
- Do not allow garden hoses to be connected directly to pressurized tanks that contain pesticides, herbicides or toxic materials of any kind. Insist that an air gap be maintained between the water source and tank when the tank is being filled.
- Do not leave your kitchen sink spray nozzle submerged in the sink.
- If you have the typical, older-style toilet that fills from the bottom, be cautious about putting toilet bowl cleaners in the tank. If the water pressure drops and the fill valve in the toilet tank is leaking, water from the tank can be drawn back into the water lines, especially if there is a faucet open in the house at the time.
- If you have an automatic sprinkler system, make sure that you have a backflow prevention device and that it is working properly.

Make every drop count

The average household in Dallas uses an average of 8,300 gallons of water a month. It just makes sense to protect our water supply. You can help us do that by preventing pollution and using the conservation tips that follow.

Indoor conservation tips

- Install an ultra-low flush toilet (1.6 gallons per flush), or modify yours to use less by installing a toilet dam or plastic jug.
- Install a low-flow showerhead (one that dispenses less than three gallons per minute).
- Reduce the level of water in your bath.
- Keep a jug of water in the refrigerator. Don't run the tap until the water runs cool.
- Only wash full loads in the washing machine and dishwasher.
- Replace your old clothes washer with a front-loading, low-water-using model.
- Rinse dishes or food in a pan; don't rinse them under running water.
- Turn water off when brushing your teeth or shaving.
- When eating out, encourage restaurants to serve water only on request.

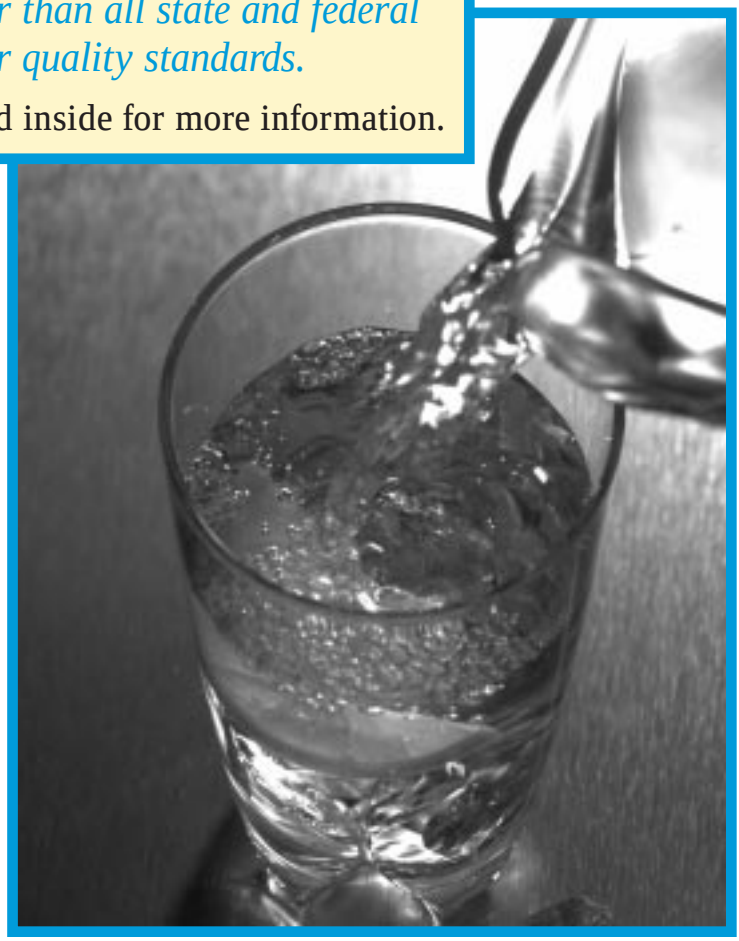
Outdoor conservation tips

- Use the principles of xeriscape (quality landscaping that conserves water and protects the environment) in your yard.
- Plant native, drought-tolerant or adapted plants in your yard.
- Water only in the morning, when evaporation rates are at their lowest.
- Use sprinklers that throw big drops of water close to the ground. Smaller drops and mist often evaporate before they hit the ground.
- Water only when your grass begins to show signs of stress – when it begins to wilt or discolor or when footprints are visible after you have walked on it.
- When you do water, water deeply and infrequently, to promote good root growth and healthy plants.
- Use a broom to clean your driveway – not a hose.
- Don't water the pavement.

To request water conservation brochures, call 214/670-3155.

Dallas water meets or is better than all state and federal water quality standards.

Read inside for more information.



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