



WATER QUALITY REPORT 2018

FROM THE CITY OF

COPPERAS COVE

The 2018 Annual Report on Drinking Water Quality describes the Public Water System of the City of Copperas Cove, its water source and the quality of its water supply. This report also conforms to the new Federal regulation to provide this annually. The City supported the passage of this regulation and we believe this information provides a valuable service to our customers.

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Our goal is to provide you with the best and safest drinking water that we can. The City's water system has been rated as a Superior Water System by the Texas Commission on Environmental Quality (TCEQ), the regulatory agency for the State of Texas.

Safe drinking water is our main concern for our customers. ***The bottom line is this: Our water is safe to drink. We have no water quality violations and our water quality meets, or is better than, State and Federal standards.***

The information in this report is also submitted to the TCEQ and to the United States Environmental Protection Agency (EPA). Both agencies monitor our compliance with the many regulatory standards and testing protocols required to assure safe drinking water.

For More Information About This Report Contact

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Public Participation Opportunities

The City of Copperas Cove is Mayor/Council governed, to participate in meetings, call 254-547-4221.

COUNCIL MEETS THE FIRST & THIRD TUESDAYS OF
EACH MONTH UNLESS OTHERWISE POSTED.
COUNCIL MEETINGS START AT 6:00 P.M.

For More Water Quality Information:

Bell County W.C.I.D. #1
201 South 38th St.
254-501-9243
<http://www.bellco-wcid.org>

EPA Safe Drinking
Water Hotline
1-800-426-479
<http://www.epa.gov/OW>

TCEQ
<http://www.tceq.state.tx.us>

En Español

Este reporte incluye información importante sobre el agua para tomar. Para asistencia española favor de llamar al telefono - (254) 547-0751 - para hablar con una persona bilingue en español.

Other non-English speaking customers requiring translation, please call - (254) 547-0751.

City Of Copperas Cove Service Area

The City of Copperas Cove obtains all of its water, pretreated from Bell County Water Control and Improvement District #1 (BCWCID #1) from Belton Lake surface water supply. The Texas Commission on Environmental Quality (TCEQ) has completed a Source Water Susceptibility Assessment Report for all drinking water systems that own their own sources. The report describes the susceptibility and types of contaminants that may come into contact with the drinking water source based on human activities and natural conditions. The Bell County Water Control and Improvement District #1 from which the City of Copperas Cove purchases water received the report. For more information on source water assessments and protection efforts at our system, please contact the City of Copperas Cove Public Works Department at (254) 547-0751. Further details about sources and source water assessments are available in Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>.

The City's Water Distribution System starts at a 500,000 gallon ground storage tank located in Killeen. From there, two sets of supply pumps convey water through two different parallel transmission lines. One is a twenty (20") inch line, and the other is a thirty (30") inch line. Once the water reaches Copperas Cove, it is distributed to fourteen (14) storage tanks for a combined storage of 7.98 million gallons.

Within the City, the Water Distribution Department maintains over 227 miles of water lines of various sizes, 1,310 fire hydrants, pumps/pump motors, and approximately 14,340 water meters. In addition, the City supplies water to Topsey Water Corporation, Cedar Grove Mobile Home Park, and Central Texas College.

State And Federal Agencies Monitor Water Quality

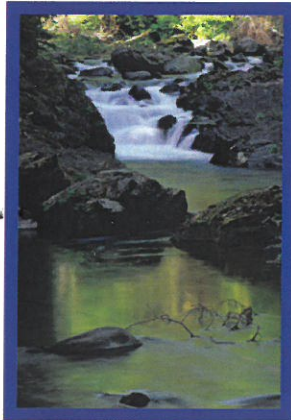
In order to ensure that tap water is safe to drink, the TCEQ and the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

All 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap 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 dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.



About the Following

The following lists all of the federally regulated or monitored constituents which have been found in your drinking water. The United States Environmental Protection Agency requires water systems to test up to 97 constituents. Listed are constituents that were detected in your drinking water.

SPECIAL NOTICE FOR THE ELDERLY, INFANTS, CANCER PATIENTS, PEOPLE WITH HIV/AIDS OR OTHER IMMUNE DISORDERS. You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in the drinking water. Infants, some elderly or immune-compromised 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.

IMPORTANT DEFINITIONS

Definitions: The following tables contain scientific terms and measures, some of which may require explanations.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. The MCL's are set as close to the MCLG's as feasible using the best 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. MCLG's allow for a margin of safety.

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL)

Used in place of MCL's. Triggers additional requirements but exceeding action levels does not constitute a violation as does exceeding a MCL.

Haloacetic Acids5 (HAA5) Group

Consists of Dichloroacetic Acid (DCAA), Monochloroacetic Acid (MCAA), Trichloroacetic Acid (TCAA), Monobromoacetic Acid (MBAA), and Dibromoacetic Acid (DBAA).

Haloacetic Acids6BR (HAA6BR) Group

Consists of MBAA, DBAA, Bromochloroacetic Acid (BCAA), Bromodichloroacetic Acid (BDCAA), Chlorodibromoacetic Acid (CDBAA), and Tribromoacetic Acid (TBAA).

Haloacetic Acids9 (HAA9) Group

Consists of DCAA, MCAA, TCAA, MBAA, DBAA, BCAA, BDCAA, CDBAA, and TBAA.

Abbreviations

<u>NTU</u>	Nephelometric Turbidity Units
<u>MFL</u>	million fibers per liter (a measure of asbestos)
<u>pCi/L</u>	Picocuries per liter (a measure of radioactivity)
<u>ppm</u>	parts per million, or milligrams per liter (mg/L) – or one ounce in 7,350,000 gallons of water
<u>ppb</u>	Parts per billion, or micrograms per liter (ug/L) – or one ounce in 7,350,000 gallons of water
<u>ppt</u>	parts per trillion, or nanograms per liter
<u>ppq</u>	parts per quadrillion, or picograms per liter
<u>mrem</u>	millirems per year – a measure of radiation absorbed by the body
<u>na</u>	not applicable
<u>avg</u>	regulatory compliance with some MCL's are based on running annual average of monthly samples
<u>MRL</u>	Minimum Reporting Limit

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, odor, and color problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not EPA. These constituents are not causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
1,1,1-Trichloroethane (ppb)	200	200	ND	No	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	3	5	ND	No	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	7	7	ND	No	Discharge from industrial chemical factories
1,2,4-Trichlorobenzene (ppb)	70	70	ND	No	Discharge from textile-finishing factories
1,2-Dichloroethane (ppb)	0	5	ND	No	Discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	0	5	ND	No	Discharge from industrial chemical factories
2,4,5-TP (Silvex) (ppb)	50	50	ND	No	Residue of banned herbicide
2,4-D (ppb)	70	70	ND	No	Runoff from herbicide used on row crops
Alachlor (ppb)	0	2	ND	No	Runoff from herbicide used on row crops
Antimony (ppb)	6	6	ND	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic (ppb)	0	10	ND	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Asbestos (MFL)	7	7	ND	No	Decay of asbestos cement water mains; Erosion of natural deposits
Benzene (ppb)	0	5	ND	No	Discharge from factories; Leaching from gas storage tanks and landfills
Benzo(a)pyrene (ppt)	0	200	ND	No	Leaching from linings of water storage tanks and distribution lines
Beryllium (ppb)	4	4	ND	No	Discharge from metal refineries and coal- burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	ND	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Carbofuran (ppb)	40	40	ND	No	Leaching of soil fumigant used on rice and alfalfa
Carbon Tetrachloride (ppb)	0	5	ND	No	Discharge from chemical plants and other industrial activities
Chlordane (ppb)	0	2	ND	No	Residue of banned termiticide
Chlorobenzene (monochlorobenzene) (ppb)	100	100	ND	No	Discharge from chemical and agricultural chemical factories
Chromium (ppb)	100	100	ND	No	Discharge from steel and pulp mills; Erosion of natural deposits
Dalapon (ppb)	200	200	ND	No	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	400	400	ND	No	Discharge from chemical factories

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Violations	Unit of Measure	Source of Contaminant
2018	Barium	0.05	0.05	0.05	2	2	N	ppm	Discharge of drilling wastes; discharges from metal refineries; erosion of natural deposits.
2018	Fluoride	0.21	0.2	0.21	4	4	N	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2018	*Nitrate	0.22	0.21	0.22	10	10	N	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2018	Cyanide	0.12	0.11	0.12	200	200	N	ppb	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
2018	Nitrite	0.05	0.05	0.05	1	1	N	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2018	Thallium	0.4	0.4	0.4	2	.5	N	ppb	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories.

Nitrate Advisory-Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for periods of time because of rainfall or agriculture activity. If you are caring for an infant you should ask for advice from your health care provider.

Maximum Residual Disinfectant Level

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2018	Chloramines	2.56	0.72	3.90	4	<4.0	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Violations	Unit of Measure	Source of Contaminant
2018	Total Haloacetic Acids	14.7	12.8	17.3	60	N	ppb	By-Product of drinking water disinfection.
2018	Total Trihalomethanes	31.6	27.8	38.2	80	N	ppb	By-Product of drinking water disinfection.

* Unregulated initial distribution system evaluation for disinfection byproducts waived or not yet sampled.

Lead and Copper

Year or Range	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	MCLG	Violations	Unit of Measure	Source of Contaminant
2016	Lead	2.1	0	15	0	N	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2016	Copper	0.500	0	1.3	1.3	N	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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 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 <http://www.epa.gov/safewater/lead>.

Total Coliform

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are harder than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption. The City of Copperas Cove collected 480 total coliform samples for 2018

Year or Range	Contaminant	MCLG	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli MCL: <small>A routine sample and a repeat sample are Total Coliform Positive, and one is also fecal Coliform or E. Coli Positive.</small>	Total No. of Positive E. Coli or Fecal Coliform Samples	Violations	Source of Contaminant
2018	Total Coliform Bacteria	0	5 % of monthly samples are positive	0		0	N	Naturally present in the environment

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Synthetic organic contaminants including pesticides and herbicides								
Atrazine (ppb)	3	3	0.21	0.2	0.21	2018	No	Runoff from herbicide used on row crops
Heptachlor (ppt)	0	400	40	40	40	2018	No	Residue of banned pesticide
Heptachlor epoxide (ppt)	0	200	20	20	20	2018	No	Breakdown of heptachlor
Hexachlorobenzene (ppb)	0	1	0.1	0.1	0.1	2018	No	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	50	50	0.1	0.1	0.1	2018	No	Discharge from chemical factories
Methoxychlor (ppb)	40	40	0.1	0.1	0.1	2018	No	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (ppb)	200	200	2	2	2	2016	No	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Pentachlorophenol (ppb)	0	1	0.04	NA	0.04	2018	No	Discharge from wood preserving factories
Picloram (ppb)	500	500	0.1	NA	0.1	2018	No	Herbicide runoff
Simazine (ppb)	4	4	0.07	0.07	0.07	2018	No	Herbicide runoff
Volatile Organic Contaminants								
Styrene (ppb)	100	100	0.5	0.5	0.5	2018	No	Discharge from rubber and plastic factories; Leaching from landfills
Tetrachloroethylene (ppb)	0	5	0.5	0.5	0.5	2018	No	Discharge from factories and dry cleaners
Toluene (ppm)	1	1	0.0005	0.0005	0.0005	2018	No	Discharge from petroleum factories
o-Dichlorobenzene (ppb)	600	600	0.5	0.5	0.5	2018	No	Discharge from industrial chemical factories

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
Di (2-ethylhexyl) phthalate (ppb)	0	6	ND	No	Discharge from rubber and chemical factories
Dichloromethane (ppb)	0	5	ND	No	Discharge from pharmaceutical and chemical factories
Dinoseb (ppb)	7	7	ND	No	Runoff from herbicide used on soybeans and vegetables
Endrin (ppb)	2	2	ND	No	Residue of banned insecticide
Ethylbenzene (ppb)	700	700	ND	No	Discharge from petroleum refineries
Ethylene dibromide (ppt)	0	50	ND	No	Discharge from petroleum refineries
Mercury [Inorganic] (ppb)	2	2	ND	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Selenium (ppb)	50	50	ND	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Toxaphene (ppb)	0	3	ND	No	Runoff/leaching from insecticide used on cotton and cattle
Trichloroethylene (ppb)	0	5	ND	No	Discharge from metal degreasing sites and other factories
Vinyl Chloride (ppb)	0	2	ND	No	Leaching from PVC piping; Discharge from plastics factories
Xylenes (ppm)	10	10	ND	No	Discharge from petroleum factories; Discharge from chemical factories
cis-1,2-Dichloroethylene (ppb)	70	70	ND	No	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	75	75	ND	No	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	100	100	ND	No	Discharge from industrial chemical factories

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, virus, and parasites that can cause symptoms such as nausea, cramps, and diarrhea and associated headaches.

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limit	Turbidity Limits	Units of Measure	Source of Contaminant
2018	Turbidity	0.29	100.00	0.3	NTU	Soil Runoff

Total Organic Carbon (TOC)

Total organic carbon (TOC) is an indirect measure of organic molecules present in water and measured as carbon. Organic molecules are introduced into the water from the source water, from purification, and from distribution materials. TOC is measured for both process control purposes and to satisfy regulatory requirements.

Year	Contaminant	Maximum Level	Minimum Level	Detected	MCLG	MCL	Violations	Source
2018	TOTAL ORGANIC CARBON (% REMOVAL)	N/A	N/A	.81	N/A	T T	N	Naturally Present In The Environment

Environmental Protection Agency (EPA)

Mandated Unregulated Contaminant - Monitoring Rule 4 (UCMR4). Following are a list of contaminants that were above the Maximum Reporting Level (MRL) set by the EPA:

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MRL	Violations	Source of Contaminant
2018	Manganese	0.65	0.5	2.7	0.4	N	Along with iron Common metallic elements found in the earth's crust. Iron pipes.
2018	HAA5	17.505	12.8	26.1	N/A	N	By-product of drinking water disinfection.
2018	HAA9	30.355	23.5	36.5	N/A	N	By-product of drinking water disinfection.
2018	HAA6Br	19.79667	15.4	22.87	N/A	N	By-product of drinking water disinfection.

According the EPA website, HAA5, HAA9, and HAA6Br, do not have a Minimum Reporting Level (MRL). TCEQ's has a MCL of 60 ug/L for HAA5. For more information regarding UCMR4 visit the EPA website at: <https://www.epa.gov/dwucmr/fact-sheets-about-fourth-unregulated-contaminant-monitoring-rule-ucmr4>.

Radioactive Contaminants

Collection Date	Contaminant	Max. Level	Range of Levels	MCLG	MCL	Units of Measure	Violation	Likely Source of Contamination
2015	Radium (Combined 226/228) (pCi/L)	1	1	0	5	pCi/L	N	Decay of natural and man-made deposits

WATER LOSS AUDIT RESULTS

All public water suppliers are required to file a water loss report annually. The City of Copperas Cove submitted its report to the Texas Water Development Board for the period of January through December 2018. The estimated loss of water for the 2018 calendar year was 244,602,000 gallons of water. Water loss occurs through water line breaks and leaks, inaccurate meter readings, theft and other causes. If you have any questions about the water loss audit, please call Water Distribution Department at (254) 547-2416 or Public Works at (254) 547-0751.

WATER CONSERVATION TIPS

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions.

Conserving water inside your home:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets, and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Turn off water while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

Conserving water outdoors:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car; save the hose for rinsing.