

Dear Bastrop County Water District Customers,

Bastrop County Water District Customers;

Welcome to the 2018 edition of the annual Consumer Confidence Report (CCR) or the water quality report as it is more commonly called. The CCR water quality data is for the calendar year 2017 as required by the regulatory agencies.

We are most pleased to share that the water quality concern associated with Total Trihalomethanes (TTHM) has been addressed. In the summer of 2017, a treatment technique which reduces the formation of TTHM's was installed at plant 2. The treatment coupled with a modification in the way the wells are being used has greatly lowered the levels and the District is now in full regulatory compliance.

The water quality data for this report is based in 2017 results, as such, the water in early 2017 was not in compliance prior to the treatment and modification changes. As such, TTHM's are noted as a violation in this report. Since the third quarter of 2017, compliance has been achieved.

The water and wastewater system are experiencing rapid growth and the Field Crews are constantly installing new service taps to which serve the new homes. The system will soon exceed 1,700 service connections.

The growth has also resulted in additional water mains being installed to serve previously unsettled areas. The District is looping many water mains as opportunities present themselves. Looping the water mains provides for better flows while enhancing redundancy for better service.

The final phase of the equipment known as Supervisory Control and Data Acquisition (SCADA) was installed. The SCADA system allows for constant monitoring of system activities and allows for adjustments to be made from remote access. The information allows for greater monitoring of system activities to improve efficiency. All three well houses are now monitored 24 hours per day.

The District website has been updated and has a great deal of information. Information is available on how a water meter works, who is responsible for what portion of the service line, an explanation of the various water charges and much more. The website has also been enhanced to improve on line transactions for bill payments.

The construction of a new storage tank is moving forward. The ability to have large quantities of water available to meet emergency situation or to enhance fire protection will be the most

important and beneficial undertaking in the history of the water system. The tank is a vital component to modernize the water supply to professional standards.

The Board of Directors has undergone changes this past year. Ms. Mary Beth O'Hanlon replaced Ms. Tammy Eden and Mr. Butch Carmack replaced Mr. John Creamer.

Ms. Eden contributed a great deal of time and effort to establish an equitable formula for prioritizing roads to be completed. Her wisdom and contributions established a consistent means of achieving the objective of the Road District. Thank you Tammy.

President Creamer served on the Board for a combined total of 16 years. He dedicated a great deal of time to serving the interests of the Village in a selfless manner. Following the fire of 2011, he basically donated thousands of hours each year towards running the District at a time when finances dramatically limited hiring staff. He kept the District operating during a very difficult time.



President Creamer was instrumental in securing a loan to purchase the wastewater system from the LCRA. Obtaining the loan saved the wastewater customers more than \$100,000 per year compared with what the LCRA was charging the District.

The time and wisdom President Creamer contributed to the District is remarkable and will always be appreciated by those who understand all he accomplished.

Please join the Directors at the monthly meeting which is typically held on the third Thursday of each month at 6:30 PM.

Sincerely,
The Board of Directors

Website: <https://bcwcid2/org/>
PWS Number: TX 0110020

WATER QUALITY

The following information is a requirement of this report:

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 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. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. The presence of contaminants does not necessarily indicate that water poses a health risk.

EPA STATEMENT

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

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 the office at 512-321-1688.

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; persons 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 providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

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. We are responsible for providing high quality drinking water, but we cannot control the variety of material 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>.

For more information about your sources of water, please refer to Source Water Assessment Viewer available at the following URL: <http://www.tceq.texas.gov/gis/swaview>. Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

Water may become contaminated through natural activities or due to the action of society. The following are the type of contaminants for which the water quality is constantly monitored:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil & gas production, mining, and farming.

Pesticides and herbicides, may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, include synthetic and volatile organic chemicals that 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, can be naturally-occurring or be the result of oil and gas production, and mining activities.

Some common questions that are asked about the water quality:

Is the water hard? No, it is actually considered soft. It does have a fair amount total dissolved solids but not in the form that results in a hard water. You do not necessarily need a water softening to reduce the "hardness" in the water.

What is the pH of the water? The pH is consistently 8.3 – 8.6 range which is classified as a water on the basic side.

Is there Fluoride in the water? Fluoride is not added to the water but it does occur naturally in the water supply at a significant level. The fluoride is within the acceptable limits and can vary from well to well. Consult with a dentist if you have questions with respect to fluoride and the health of teeth, especially with children.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

WATER QUALITY TEST RESULTS

mrem: millirems per year (a measure of radiation absorbed by the body)

NTU: nephelometric turbidity units (a measure of turbidity)

pCi/L: picocuries per liter (a measure of radioactivity)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

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

ppt: parts per trillion, or nanograms per liter (ng/L)

ppq: parts per quadrillion, or picograms per liter (pg/L)

WATER QUALITY TEST RESULTS

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

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Maximum Contaminant Level or MCL: 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.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Maximum Contaminant Level Goal or 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.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum residual disinfectant level or MRDL: 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.

Maximum residual disinfectant level goal or MRDLG: 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.

MFL: million fibers per liter (a measure of asbestos)

na: not applicable.

REGULATED CONTAMINANTS DETECTED - 2017 WATER QUALITY DATA

Lead and Copper Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.29	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	2.1	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

REGULATED CONTAMINANTS

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2017	12	10.5 - 14	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	86	36 - 86	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.0279	0.0243 - 0.0729	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	2.06	.15 - 2.06	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2017	0.08	0.05 - 0.08	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/positron emitters	02/02/2015	6	0 - 6	0	4	+	N	Decay of natural and man-made deposits.

*EPA Considers 50 pCi/L to be the level of concern for beta particulates

Combined Radium 226/228	02/02/2015	1.5	1.5 - 1.5	0	5	pCi/L*	N	Erosion of natural deposits.
Di (2-ethylhexyl) phthalate	2017	1	0.74 - 0.74	0	6	ppb	N	Discharge from rubber and chemical factories.

DISINFECTANT RESIDUAL

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Free	2017	1.07	0.44 - 2.20	4	<4	ppm	N	Water additive used to control microbes.

VIOLATIONS TABLE

Total Trihalomethanes (TTHM)			
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	04/01/2017	06/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	07/01/2017	09/30/2017	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

FIRE HYDRANTS AND FIRE PROTECTION

Board Members Sam Kier and Mary Beth O'Hanlon met with the Bastrop City (Mark Wobus) and Bastrop County ESD #2 Fire Chiefs (Josh Gill) in June 2018. The District has more than 125 hydrants. Due to the initial design and construction of the water system the capacity and flow associated with the hydrants are limited. The Chiefs praised two of the District's recent initiatives as positively impacting their ability to fight fire within the Village. First, The decision to paint all hydrants with bright yellow paint will enable firefighters to quickly spot hydrants during emergencies and second, the District's work to loop water lines, improving pressure and water flow. We agreed to properly mark the hydrants that need repair and to fix them as soon as possible. We gave each Chief a map of where all the hydrants are located. The Chiefs acknowledged that our plan to add a 120 foot tall water tower to our water system was a very positive step in making the system better suited for assisting in fire protection. Once the tower is approved and operational the District will be able to perform Fire Flow Tests to better observe where more improvements need to be made to the system for fire protection (i.e. larger supply pipe, additional hydrants etc.). The first step to improved fire protection will be the construction of a new water supply tower near the Water District building.

The Fire Departments acknowledged that they jointly discuss and plan for events in Tahitian Village. They train and respond to every event assuming that there is no hydrant available. So being able to use a hydrant is a plus to their established process.

Part of their standard Tahitian Village response is, when possible, bring at least 2 trucks to every fire event. This gives the fire department at least 2,000 gallons of water to start with and, if needed, to then seek out the nearest hydrant or fire tender truck for more supply. They have a process to extract water from our hydrants even if the hydrant is on our smallest supply line.

They commended us on our desire to keep improving our capabilities and awareness and willingness to have an open communication channel with the departments and the residents. The Director's noted that the two departments seem to work very well together and also hope that they continue to work towards sharing space at the Bastrop City Fire Station in Tahitian Village. Having a water system with fire hydrants and also having a fire station within 5 miles of most people's homes are real assets for fire protection in Tahitian Village.

WATER SOURCES

The Water District obtains its water supply from 5 wells it owns and operates. The wells range in depth from 560 feet to 1,020. The District is authorized to withdraw up to 1.5 million gallons per day. Presently, the District withdraws on average 320,000 gallons per day. As such, water quantity will not be a concern. The ability to withdraw the water will most likely require additional wells in the future. The positive aspect is the aquifer has a large capacity of water to serve the needs of the District. The distribution system that serves the Village is somewhat compartmentalized due to the elevation changes. Plants 1 and 2 are located at an elevation of 521 feet and Plant 3 is located down by the River at an elevation of 362 feet. As such, various pressure zones are created in order to limit pressure variations at any one house.

WATER TREATMENT

The District has very simple treatment, mostly in the form of chlorine disinfection. Plants 1, 2 and 3 all add chlorine to the water to ensure the water is safe to drink. The District uses ground water which is free of pathogenic organisms as it is withdrawn, the chlorine is added as a safety precaution while the water travels from the well into the storage tanks and eventually to each tap. At Plant 2 located off of McAllister Road, the water is also treated with a phosphate product designed to sequester the naturally occurring iron and manganese. Iron and manganese can cause aesthetic problems by staining fixture's and discoloring the water. The phosphate acts to encapsulate the iron and manganese molecules while they are still in a dissolved form before they can be exposed to oxygen and turn to rust.

WATER METERS

The District is in the process of converting all the water meters from manual read to automatic radio read meters. The radio read meters will reduce the amount of time needed to read the meters each month and will improve the reading accuracy. The technology allows the meter to be read and a bill printed without any employee calculations or data input. The result is an accurate meter read at less cost. We hope to complete the change out by the years end.



Last Pines Nature Trail

HELPFUL ADVICE

WATER CONSERVATION AND OUTDOOR WATER USE - Please keep in mind that water is a precious resource and it should never be taken for granted. Water use throughout the winter months is very consistent on a daily basis. Water use in the summer months can vary dramatically depending on the weather and the practice of watering lawns. Lawns do not need to be watered every day in order to look good and remain healthy. Many homeowners could save themselves the cost of watering the lawn and conserve water if they become familiar with the proper approach to lawn maintenance. There is a tremendous amount of information available on the AWWA and EPA websites.

SERVICE LINE OWNERSHIP

There are often questions on who is responsible for the operation and maintenance of the service line which allows water to enter a building.

The water provider is always responsible for the water mains in the street and the portion of the service line that travels from the main to the meter box located at or near the property line.

The property owner is responsible for the pipe that leaves the meter box and all other plumbing. Please visit our website for more information.

IRON IN THE WATER

Although there are no adverse health effects due to iron in the water, the iron can result in aesthetic concerns. The following are some helpful suggestions you may wish to implement in order to reduce the aesthetic effects of the iron:

1. FLUSH THE HOT WATER TANK - The majority of concerns associated with the discolored water are associated with hot water tanks. This is due to the fact that heat is an enzyme to any chemical reaction and the heat converts the liquid iron to the solid iron which we can then see. Every few months, flush the hot water tank by opening the spigot and running water to waste through a hose or into a bucket until the water clears. This will remove the accumulated iron from the bottom of the hot water tank which will help to keep the water clear while also improving the heating efficiency.

2. USE IRON OUT OR EQUIVALENT - Become familiar with the product called Iron Out which is used to clean iron stains or remove stains from clothes. Iron out is available at most hardware stores. There are also other products which are designed to reduce the effects of iron.



KEEP METER BOX ACCESSIBLE

Every customer has a water meter located in a "meter box" which is typically located at the edge of the property. The meter box protects the meter. There is also a valve located inside the meter box that allows the water to be shut off to the house.

It is strongly advised that the meter box be kept cleaned and accessible to access the shut off valve in an emergency. Should a water line break inside the house, the ability to shut off the water quickly can prevent damage.

Everyone who may need to shut off the water quickly should learn where this valve is located. Exercising the valve on a periodic basis is also a useful activity to make sure it works when needed.

BASTROP COUNTY WATER CONTROL *and* IMPROVEMENT DISTRICT *Personel*

A member of the Operations staff is on **call 24 hours per day/365 days per year.**

Each of the Operations Staff is a licensed water and or wastewater operator which requires substantial experience and a formal written testing process.

The District owns a small line of construction equipment which allows most water system repairs to be made quickly.

If you ever have an urgent need for a service man, **call 512-321-1688** during or after normal working hours.

Left to Right

*Patricia Lujan, Alma Rodriguez,
Freida Reed*

Adam Brown

Tyler Walsh



Joe Schwindt, Cody Ely, Erik Anderson, Shawn Littleton, Matt Bumstead

