



Plant 1

Board of Directors

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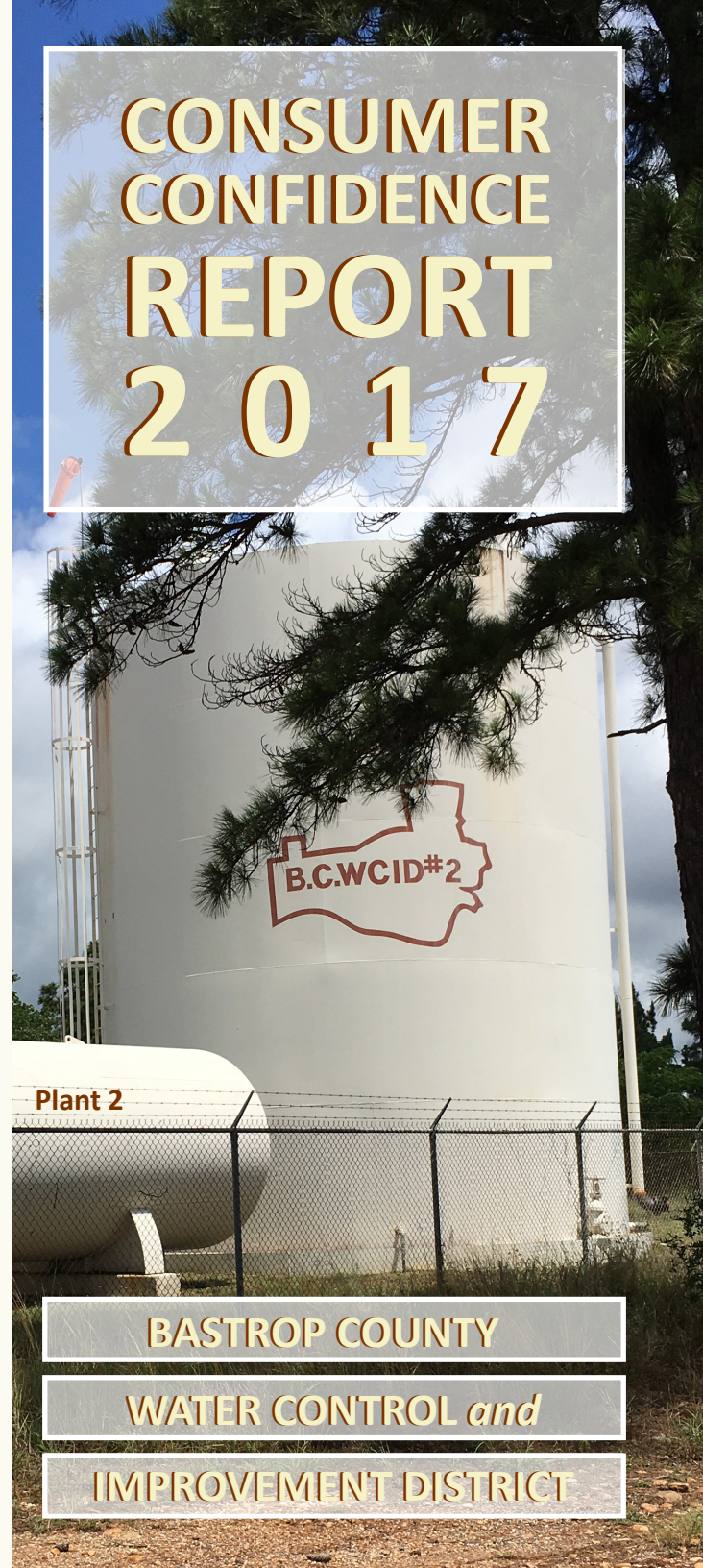
Sam Kier, *Treasurer*

Tammy Eden, *Secretary*

Victor Gonzalez, *Director*



Plant 3



Plant 2

CONSUMER CONFIDENCE REPORT 2017

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

Dear Bastrop County Water District Customers,

Welcome to the 2017 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 2016 as required by the regulatory agencies.

We would also like to share with you some general information about the water and some helpful ideas you may wish to become familiar with for your personal interest.

Numerous changes are under way with the objective of improving efficiency in all areas of the utility. We are also changing the way we install infrastructure to increase the longevity of everything that is constructed. The rocky soils coupled with the plastic water mains has resulted in the propensity for greater pipe failures than would normally be observed. All new water mains will be of a superior quality designed to withstand the forces created by the environment and serve the interests of our customers for generations to come.

We are in the process of completing the transition from manual read meters to meters that are read by a radio frequency directly to a computer. The new meters provide for more accurate reads due to the elimination of human error. They also allow for a more efficient reading process which saves time and cost. We hope to complete the remaining 400 meters before the year is over.

We recently installed equipment which is known as Supervisory Control and Data Acquisition (SCADA). The SCADA system allows for constant monitoring of system activities and allows for adjustments to be made from remote access. Once the equipment is installed at all our facilities, the information gathered will allow for a more concerted means to operate the system for improved efficiency as well as improved operational decisions.

A significant component the water system needs is a large storage tank. We are beginning the process of designing a tank that will improve fire protection and ensure more water is available in the event of an emergency. It will be a large undertaking and will be a significant step in improving the overall operation of the water supply.

A contract has been signed to install equipment which is designed to reduce the levels of Total Trihalomethanes (TTHM's) in the water supply. TTHM's are a common problem due to the natural characteristics of the local aquifers. The treatment equipment is scheduled to be installed in July of 2017 although it depends on the time it takes the regulators to complete their paperwork. We expect to successfully reduce the levels and look forward to reporting on such as soon as sufficient testing is complete.

I would like to thank the Directors for the significant amount of time they sacrifice to contribute to the improvement of the Water District. They receive nothing for their efforts other than knowing they are contributing to the most valuable part of any community – the water supply. The Village is fortunate to have as many highly dedicated and talented residents serving on the board.

Please join the Directors at the monthly meeting which is typically held on the third Thursday of each month at 6:30 PM. Please check the website or announcements on your water bill for any changes to the routine schedule. Please stop in or schedule a time we can sit down and discuss any questions you may have with respect to your water system.

Sincerely,



Jim Ouellet, PE
General Manager

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.

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 - 2016 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)	2016	14.5	3.9 - 14.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	102	28.8 - 102	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	2016	0.0757	0.0243 - 0.0757	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	05/01/2014	2.02	0.14 - 2.02	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]	2016	0.07	0.04 - 0.07	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/photon emitters	02/02/2015	6	0 - 6	0	50	pCi/L*	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.
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VIOLATIONS TABLE

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	10/01/2015	09/26/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Public Notification Rule			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	01/29/2016	05/27/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

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	01/01/2016	03/31/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.



FIRE HYDRANTS

The District has more than 125 hydrants. Due to the initial construction of the water system, the capacity of flow associated with the hydrants is limited. The size of the water mains is not sufficient to move the volume of water desired for most firefighting requirements. In addition, the size of the storage tanks limit the overall capacity of water availability. The District will be painting all of the hydrants yellow during the course of the summer. The color will differentiate and instantly identify the hydrants to the City of Bastrop or the Bastrop County Fire Departments. The respective Fire Departments will know the capabilities of the yellow hydrants and use them accordingly. The hydrants are capable of refilling holding tanks but cannot be connected directly to a pumping truck due to the likely hood of damage to the pipes. A faulty or broken fire hydrant is worse than no fire hydrant. A fire fighter connecting to a hydrant only to find out it is not functioning properly wastes valuable time. The District will be making the operation and maintenance of the hydrants a priority over the next year. Maintaining and flushing hydrants will be a routine yearly activity. In an effort to assist emergency personal, please take a minute to keep the area around the hydrant near your house clear.

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.



*Lost 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.

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 *Personal*

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.

Jim Ouellet



Tyler Walsh



Left to Right

*Freida Reed, Patricia Lujan
Palmira Ramon, & Alma Rodriguez*



Shawn Littleton



Joe Schwindt



Matt Bumstead



Jonatan Hidalgo



Erik Anderson



Adam Brown

