

# 2015 DRINKING WATER QUALITY REPORT

## Bistone Municipal Water Supply District

### **Know the Facts**

We're pleased to present to you our 2015 Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. We are required by the Safe Drinking Water Act to prepare and deliver this report to you on an annual basis.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. To focus everyone's efforts at the Water District, a mission statement was adopted which states, "*Our mission is to provide our customers with safe drinking water in a customer friendly atmosphere, providing an environment for the development of our personnel while providing fiscal responsibility for our facilities and by meeting the challenging regulatory concerns and our customers future needs and requirements*".

We are pleased to report that our drinking water is safe and meets federal and state requirements.

### **Notice To At-risk Populations**

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or Immuno-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 800-426-4791.

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (254) 562-5922.

## Who Are Our Customers?

The District's primary responsibility is wholesale water supply. The City of Mexia, Mexia State Supported Living Center, City of Tehuacana, White Rock S.U.D. (excluding Forest Glade system) and the City of Coolidge (for emergency supply only) are the District's wholesale customers at this time. The District also has 235 direct retail customers. They are located on the east side of Lake Mexia and along Highway 39.

The City of Mexia sells water, purchased from the District, to their citizens inside the City limits. The City of Mexia also sells wholesale water to the following entities: Shiloh W.S.C., White Rock S.U.D. (Forest Glade area), West 84 W.S.C. and the City of Wortham.

## Where Do We Get Our Drinking Water?

We currently have two separate water sources. They are Lake Mexia (surface water) and the Carrizo-Wilcox aquifer (ground water).

Although we have two sources of water, we do **not** mix lake water and ground water together. Bistone maintains each system independently of the other. Owning and operating two water plants, with separate water sources is beneficial to our customers. It gives Bistone the ability to serve all customers from only one system at a time or to have both systems working separately. The City of Mexia and Bistone's retail customers along Highway 39 are served by the ground water system. The lake plant serves the Mexia State Supported Living Center, City of Tehuacana, White Rock S.U.D. and retail customers east of Lake Mexia, when it is in service. During 2015 we did **not** use the lake plant. All of our customers received ground water **all** year long.

The TCEQ has completed a Source Water Susceptibility Assessment for your drinking water source(s). This report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in this assessment will allow us to focus our source water protection activities.

## What You Can Expect in Your Drinking Water?

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 District's business office.

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 Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Bistone Municipal Water Supply District routinely monitors for constituents in your drinking water according to Federal and State Laws. We tested for many possible contaminants. The tables included show the results of our monitoring for the period of January 1 to December 31, 2015. Only the contaminants that were detected are listed in the tables.

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. The date the contaminant was tested is included, if the data is more than one year old.

TCEQ completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact R. Brent Locke at 254-562-5922.

As you will see in the tables, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water **IS SAFE** at these levels.

## **General Information About Water Sources**

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.

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, agricultural 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 might have 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.

## Definitions

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you understand these terms, we've provided the following definitions and abbreviations.

Parts per million (ppm) or Milligrams per liter (mg/l) – One part per million corresponds to one minute in two years, or a single penny in \$ 10,000.

Parts per billion (ppb) or Micrograms per liter (g/l) – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$ 10,000,000.

Picocuries per liter (pCi/L) – A measure of radioactivity.

Nephelometric turbidity unit (NTU) – A measure of turbidity; a measure of the clarity of water.

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

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

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to 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.

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 Residual Disinfectant Level Goal (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 contamination.

Turbidity – A measure of cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity in excess of 5 NTU is just noticeable to the average person.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-ten thousand chance of having the described health effect.

## **Questions and Public Participation Opportunities**

If you have any questions about this report or any other issue concerning your water utility, please contact R. Brent Locke, General Manager, at 254-562-5922. We want you to be informed about our water quality. Our office is open Monday – Friday, 8:00 AM to Noon and 1:00 PM to 5:00PM.

To learn more, please attend any of our regularly scheduled Board meetings. They are held monthly, on the third Monday at 6:00 PM in our Lake Mexia Pavilion, located at 730 FM 2681, Lake Mexia. If the third Monday is a holiday, the meetings are normally held the next business day.

## **Bistone Happenings**

In December 2012, the Texas Water Development Board approved \$ 6,493,865 in financial assistance to Bistone to finance water system improvements. This consists of a \$ 6,130,000 loan and \$ 363,865 in loan forgiveness. The loan has a 20-year payback period.

In the water loss audit submitted to the Texas Water Development Board for the time period of January through December 2015, our retail system lost an estimated 2,024,247 gallons of water. This is a significant amount of water; however, it is actually a 5% loss of our 38,998,868 gallons of retail water volume for the same period. The Total Gallons per Capita per Day (GPCD) based on our retail population is 145 gallons. Our goal by 2018 is 92 Total GPCD. This is an improvement from 2014. This is just one of the many reasons for our project.

The improvements the District is in the process of completing are actually 3 projects and addresses needed infrastructure upgrades, system sustainability and optimization of our system's operations. The District decided that new debt was appropriate at this time to reach our goals. The District requested financial assistance from the TWDB and the EPA thru the Drinking Water State Revolving Fund. The District was notified by TWDB that they had approved our funding request. One major component will be the development of an asset management plan to help us address long-term system sustainability. A brief description of each project follows.

Groundwater Treatment Plant Improvements –The 500,000 gallon detention tank (a Pre-Stressed, Wire-Wound Concrete Tank) has been built and is currently in operation. The cascade aerator is mounted on top of the concrete detention tank. The existing 150,000 gallon bolted steel detention tank has been removed. The existing pressure filters will be upgraded to include air scour. This will help to more efficiently clean the media thereby reducing the water required to backwash the filters by an estimated 50%. The District currently has 2 pressure filters at this plant to treat water. A third filter has been added in anticipation of increased production. The District settles the backwash water used to clean the filters in a pond. This water cannot be cost effectively cleaned and reused at this time. The existing backwash pond has been enlarged. The increased production will mean more backwash water that needs to be stored, cleaned, tested for compliance and finally discharged. There are also miscellaneous improvements associated with the project. Communication upgrades, security upgrades, a restroom, an access road, fencing and raw and production meters are part of this project. We are approximately ninety percent complete with this project.

Surface Water Treatment Plant Improvements – We improved the existing clarifier/sedimentation basin by erecting a dome style roof; this will reduce the sunlight and heat transfer onto the water and improve the treatment process. An ultraviolet light plus hydrogen peroxide system will be added. This system has many advantages. It disinfects the water, provides a barrier to pesticides, it treats environmental contaminants (such as pharmaceuticals) and it addresses taste and odor problems. This project is approximately ninety percent complete.

Water Meter Replacement – All meters will be replaced with an Automatic Meter Reading System (AMR). Accessories with this system will include leak detection, backflow detection and tamper detection. The greater accuracy of these meters along with the extra accessories included will assist the District in reducing their water loss and help determine if water theft is occurring. All retail meters as well as all wholesale meters will be replaced or upgraded. In additions, all wholesale meters will be placed on the existing SCADA system. All water well meters, raw water meters at both plants and production meters at both plants will be replaced or upgraded and placed on the SCADA system. This real-time reporting will allow for optimal management of the District’s facilities and allow for more “real-time” detection of water leaks and an overall reduction in water loss by an estimated minimum of 5%. In addition, the operators will be provided with “real-time” meter information to better match production needs with system demands.

## Start Saving Water and Money Today

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature

- Insulate hot water pipes. You won't waste water waiting for it to get hot and you will save energy too.
- Prevent evaporation of water. Water lawns early in the morning or in early evening during the hotter summer months.
- Don't waste water when brushing your teeth. Shut off the water until it is time to rinse.
- Wash only full loads of dirty clothes.
- Do not use the toilet as a trash can.
- Use a sprinkler that puts out big drops of water instead of a fine mist that evaporates.
- Sweep the driveway, sidewalk, porch, etc. with a broom instead of using the water hose.
- Replace old energy and water wasting devices with the new designed low flow toilets, shower heads and washing machines. Be "water smart".
- Only water lawns once a week and only when needed.
- Report water leaks.
- Fix all leaks, drips, etc., as soon as possible.
- Take short showers- a 5 minute shower uses 4-5 gallons of water compared to up to 50 gallons for a bath.

Personville Water Treatment Plant  
Ground water – Wells  
2015 Test Results Table

**Inorganic Contaminants**

Constituent	Unit of Measure	MCLG	MCL	Level Detected	Violation	Source of Constituent
Barium 9/11/2013	PPM	2	2	0.124	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride 11/9/2015	PPM	4	4	.716	No	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Radium-228 11/10/2015	pCi/l	0	5	1.8	No	Decay of natural and man-made deposits.
Nitrate (as nitrogen) 11/9/2015	PPM	10	10	.359	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Personville Water Treatment Plant  
Ground water – Wells  
2015 Test Results Table

**Inorganic Contaminants (Continued)**

Constituent	Unit of Measure	MCLG	MCL	Level Detected	Violation	Source of Constituent
Gross Alpha 11/10/15	pCi/l	0	15 pCi/l	<3.0	No	Erosion of natural deposits.
Gross Beta 11/10/15	pCi/l	0	50 pCi/l (Screening Level)	<4.0	No	Decay of natural and manmade deposits.

Not every contaminant must be tested annually. Those tested in previous years have been tested according to regulations.

**Volatile Organic Contaminants**

Constituent	Unit of Measure	MCLG	MCL	Average Level Detected	Range Detected	Violation	Source of Constituent
Total Trihalomethanes 2015	PPB	0	80	24.7	11.5 – 26.1	No	By-product of drinking water disinfection.
Haloacetic Acids 2014	PPB	N/A	60	1.2	0 – 3.7	No	

### Unregulated Contaminants

Constituent	Unit of Measure	Average Level Detected	Range Detected	Reason for Monitoring
Chloroform	PPB	1.26	<1.0 – 2.01	By-product of drinking water disinfection.
Dibromochloromethane	PPB	10.78	4.6 – 11.8	
Bromodichloromethane	PPB	5.9	1.4 – 5.76	
Bromoform	PPB	8.45	5.4 – 7.24	
Dibromoacetic Acid	PPB	.8	0 – 1.2	
Bromochloroacetic Acid	PPB	.55	0 – 1.2	
Monochloroacetic Acid	PPB	3.70	0-3.7	

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

### Disinfectant Level

Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
Chlorine	1.85	0.52	3.90	4.0	<4.0	PPM	Disinfectant used to control microbes.

### Regulated at Your Tap 2014 Test Results Table

#### Inorganic Contaminants

Constituent	Unit of Measure	MCGL	MCL	90 <sup>th</sup> Percentile Values	Violation	Source of Constituent
Copper	PPM	1.3	AL=1.3	0.26	No	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Lead	PPB	0	AL=15	1.6	No	Corrosion of household plumbing systems, erosion of natural deposits.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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>.”

Samples were taken from ten different locations. None of our sample sites exceeded the action level for lead or copper.

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person’s total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.