

2017 Consumer Confidence Report

Water System Name: CITY OF FIREBAUGH Report Date: 5/25/18

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2017 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: SIX GROUND WATER WELLS

Name & general location of source(s):

WELLS #13, #15, #16 SERVE WATER TREATMENT PLANT #1
WELLS #11, #12 AND #17 SERVE WATER TREATMENT PLANT #2

Drinking Water Source Assessment information:

Source water assessment surveys for Wells #11, #12 and #13 which produce water for the City of Firebaugh Water System was conducted on July 1st, 2002. A source water assessment survey was completed September 2012 for Wells #15 and #16. The State Water Resource Control Board Division of Drinking Water is currently working on the source water assessment for Well #17

Well #11

The source is considered most vulnerable to the following activities not associated with any detected contaminates: surface water bodies, automobile-gas stations and septic systems-high density >1 acre. The city's water quality monitoring has not detected any contaminants that are associated with the identified Possible Contaminating Activities in the area. Naturally occurring arsenic is present in three of the wells and naturally occurring iron and manganese are present in all of the wells. The city provides treatment to reduce arsenic, iron, and manganese concentrations. The discharge from this well is blended with wells No. 12 and 17 prior to treatment.

Well #12

The source is considered most vulnerable to the following activities not associated with any detected contaminates: Surface water bodies, automobile-gas stations and septic systems-high >1 acre. The city's water quality monitoring has not detected any contaminants that are associated with the identified Possible Contaminating Activities in the area. Naturally occurring arsenic is present in three of the wells and naturally occurring iron and manganese are present in all of the wells. The city provides treatment to reduce arsenic, iron, and manganese concentrations. The discharge from this well is blended with wells No. 11 and 17 prior to treatment.

Well #13

The source is considered most vulnerable to the following activities not associated with any detected contaminates: Surface water bodies, automobile-gas stations, landfill/dumps, waste water treatment plants and septic systems-higher density >1 acre. The city's water quality monitoring has not detected any contaminants that are associated with the identified Possible Contaminating Activities in the area. Naturally occurring arsenic is present in three of the wells and naturally occurring iron and manganese are present in all of the wells. The city provides treatment to reduce arsenic, iron, and manganese concentrations. The discharge from this well is blended with wells No. 10,15and 16 prior to treatment.

Well #15

The source is considered most vulnerable to the following activities associated with contaminates detected in the water supply: Schools. The source is considered most vulnerable to the following activities not associated with any detected contaminates: Agricultural drainage. Manganese, arsenic, and iron were detected at levels above MCL. Iron and manganese are naturally occurring and were not associated with any PCA activities. Arsenic could be naturally occurring or the nearby school could be contributing to the arsenic contamination. All three contaminants are currently removed from the water supply via a treatment plant.

Well #16

The source is considered most vulnerable to the following activities associated with contaminates detected in the water supply: Airports-maintenance fueling areas, automobile-body shops, automobile-repair shops, fleet/truck/bus terminals, junk/scrap/salvage yards, schools. The source is considered most vulnerable to the following activities not associated with contaminates detected in the water supply: historic gas stations. The water system's water quality monitoring has identified arsenic, manganese, and iron as testing above the MCL set for these constituents. The arsenic contamination

was associated with 16 possible contaminating activities in the zones surrounding well 16; it is also possible that the Arsenic contamination could be naturally occurring. Iron was not associated with any possible contaminating activities and must be naturally occurring. All three contaminants are currently removed from the water supply via a treatment plant.

Well #17

Not completed

Time and place of regularly scheduled board meetings for public participation:

1st and 3rd Mondays of each month at 6:00 pm. Location: Firebaugh Community Center 1655 13th Street Firebaugh Ca. 93622

For more information, contact: Noah Marquez Phone: (559)694-6164

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency (U.S. EPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (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 (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.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variations and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

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.

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.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

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

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

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

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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	2	1	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER							
Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	7/23/15	20	8.1	1	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/23/15	20	.17	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2017	131.6	100-150	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2017	195	100-270	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
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Chemical or Constituent	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
ARSENIC (PPB) Treatment Plant #1 Treatment Plant #2	2017 2017	4.00 1.36	0-6.7 0-3.4	10	.004	Erosion of natural deposits: runoff from orchards: glass and electronics products wastes.
Barium (ppm)	2017	.014	.089-.23	1	2	Discharge of oil drilling waste and from metal refineries: erosion of natural deposits
Chlorine (ppm) Distribution System Residual	2017	.68	.51-.99	4	4	Drinking water disinfectant added for treatment.
Fluoride (ppm)	2017	0.058	0-0.24	2	1	Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.
Gross Alpha (pCi/L)	2017	8.32	1.76-15.4	15	N/A	Decay of natural and man-made deposits
Selenium (ppb)	2017	1.21	0.2.7	50	30	Discharge from petroleum, glass and metal refineries: erosion of natural deposits: discharge from mines and chemical manufacturers
Turbidity (ntu)	2017	1.19	.17-2.5	5	N/A	Soil runoff
Radium 228 (pci/L)	2015	.807	.615-1.0	5	N/A	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increase chance of getting cancer
TTHM (ppb)	2017	51	45-57	80	N/A	Some people who drink water containing trihalolmethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have increased risk of getting cancer

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Color (units)	2017	4.16	0-10	15	N/A	Natural occurring organic materials.
Conductivity (uhmos/cm)	2017	947	910-1100	1600	N/A	Substances that form ions when in water: sea water influence
Chloride (ppm)	2017	168	140-210	500	N/A	Runoff/leaching from natural deposits: seawater influence
Iron (ppb) Treatment Plant #1 Treatment Plant #2	2017	5.38 8	0-.20 0-.12	300	N/A	Leaching from natural deposits. industrial waste
Manganese (ppb) Treatment Plant #1 Treatment Plant #2	2017	.27 10.55	0-.013 0-.046	50	N/A	Leaching from natural deposits

Odor (units)	2017	0	0	3	N/A	Natural occurring organic matter.
Sulfate (ppm)	2017	84	49-110	500	N/A	Runoff/Leaching from natural deposits: industrial wastes
Total Dissolved Solids (ppm)	2017	560	460-660	1000	N/	Runoff/Leaching from natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Chlorate (ppb)					
Treatment Site #2 (raw)	2013	1222	944-1500	800	EPA does not have health effect language at this time.
Distributions system	2013	715	431-1000		

Additional General Information on Drinking Water

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 the 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).

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 (CDC) 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).

Lead-Specific Language for Community Water Systems: 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. The City of Firebaugh 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. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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 (1-800-426-4701) or at <http://www.epa.gov/lead>.

“This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Effective April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.”

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**Summary Information for Violation of a MCL, MRDL, AL, TT,
or Monitoring and Reporting Requirement**

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
STATE PRIMARY TOTAL COLIFORM MCL VIOL – NOT CR6	Our water system failed the drinking water standard for total coliform during June 2017 due to new operator not following proper bacteriological sampling procedure. We have adopted Bacteriological Sampling Standard Operating Procedures to ensure that this will not occur again.	6/01/2017-6/30/2017	We have adopted Bacteriological Sampling Standard Operating Procedures	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially -harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

For Water Systems Providing Groundwater as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUNDWATER SOURCE SAMPLES					
Microbiological Contaminants (complete if fecal-indicator detected)	Total No. of Detections	Sample Dates	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<i>E. coli</i>	0		0	(0)	Human and animal fecal waste
Enterococci	0		TT	n/a	Human and animal fecal waste
Coliphage	0		TT	n/a	Human and animal fecal waste

**Summary Information for Fecal Indicator-Positive Groundwater Source Samples,
Uncorrected Significant Deficiencies, or Groundwater TT**

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUNDWATER SOURCE SAMPLE

SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES				
VIOLATION OF GROUNDWATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to ____ NTU in 95% of measurements in a month. 2 – Not exceed ____ NTU for more than eight consecutive hours. 3 – Not exceed ____ NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	
Highest single turbidity measurement during the year	
Number of violations of any surface water treatment requirements	

- (a) A required process intended to reduce the level of a contaminant in drinking water.
- (b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

VIOLATION OF A SURFACE WATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language

Summary Information for Operating Under a Variance or Exemption

**Summary Information for Federal Revised Total Coliform Rule
Level 1 and Level 2 Assessment Requirements**

Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s). [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.

During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were required to be completed for our water system. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.

Level 2 Assessment Requirement Due to an *E. coli* MCL Violation

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) identify problems and to correct any problems that were found during these assessments.

We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.