2023 Consumer Confidence Report

Water System Information

Water System Name: City of Firebaugh

Report Date: 6/18/2024

Type of Water Source(s) in Use: Six Groundwater Wells

Name and General Location of Source(s): Wells #13, #15, #16 serve Water Treatment Plant 1 and Wells #11, #12, #17 serve Water Treatment Plant 2 at 1133 “P” Street, Firebaugh CA 93622

Drinking Water Source Assessment Information: Wells #11, #12 and #13 completed on July 1st of 2002. Wells #15 and #16 completed in September of 2012. Well #17 completed on June 2024 – please see attached file at the of the report.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: 1st and 3rd Monday of each month at 6:00pm meetings are held at the Firebaugh Community Center 1655 13th St, Firebaugh CA 93622.

For More Information, Contact: Michael Molina (559) 659-2043

About This Report

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 to December 31, 2023 and may include earlier monitoring data.

Terms Used in This Report

Term	Definition
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.
Maximum Contaminant Level (MCL)	The highest level of 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).

Term	Definition
Maximum Residual Disinfectant Level (MRDL)	The highest level of disinfectant is 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.
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.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Secondary Drinking Water Standards (SDWS)	MCLs are 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.
Variances and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
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)

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 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	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
E. coli	0	0	0	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	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	2023	20	0	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2023	20	0.099	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)	2022-2023	147	92-270	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2022-2023	145	70-220	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

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Arsenic (ug/L) (Raw)	2022-2023 (Quarterly)	**14***	4.2-**43***	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronic production wastes.
Arsenic (ug/L) (Treatment **#1**)	2023 (Weekly)	4.59	2.8-**10***	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronic production wastes.
Arsenic (ug/L) (Treatment **#2**)	2023 (Weekly)	4.7	2.1-6.8	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronic production wastes
Barium (mg/L)	2022-2023	0.11	0.05-0.21	1	2	Discharges of oil drilling wastes and from meta refineries; erosion of natural deposits.
Fluoride (mg/L)	2022-2023	0.095	ND-0.27	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories

Gross Alpha (pCi/L)	2020-2023	4.2	1.96-4.97	15	0	Erosion of natural deposits.
Selenium (ug/L)	2022-2023	2.1	ND-5.5	50	30	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; run off from livestock lots (feed additive).

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (mg/L)	2022-2023	168	110-310	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Color (unit)	2022-2023	2.5	ND-5	15	N/A	Natural-occurring organic materials.
Iron (ug/L) (Raw)	2023 (Quarterly)	204	36-**610***	300	N/A	Leaching from natural deposits; industrial wastes.
Iron (ug/L) (Treatment **#1**)	2023 (Weekly)	10	ND-60	300	N/A	Leaching from natural deposits; industrial wastes.
Iron (ug/L) (Treatment **#2**)	2023 (Weekly)	27.9	ND-**600***	300	N/A	Leaching from natural deposits; industrial wastes.
Manganese (ug/L) (Raw)	2023 (Quarterly)	**430***	**130*-670***	50	N/A	Leaching from natural deposits.
Manganese (ug/L) (Treatment **#1**)	2023 (Weekly)	ND	ND-ND	50	N/A	Leaching from natural deposits.

Manganese (ug/L) (Treatment **#2**)	2023 (Weekly)	ND	ND-ND	50	N/A	Leaching from natural deposits.
Specific Conductance (uS/cm)	2022-2023	997	700-1600	1600	N/A	Substances that form ions when in water; seawater influence.
Sulfate (mg/L)	2022-2023	86	39-120	500	N/A	Runoff/leaching from natural deposits industrial wastes
Total Dissolved Solids (mg/L)	2022-2023	578	420-880	1000	N/A	Runoff/leaching from natural deposits.
Turbidity (ntu)	2022-2023	0.74	0.18-1.5	5	N/A	Soil runoff.

Table 6. Detection of Additional Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Typical Source of Contaminant
Distribution System Total Trihalomethanes TTHM (ug/L) (CA1010005_DST_**901**)	12/27/23	**130***	N/A	80	Byproduct of drinking water disinfection.
Distribution System Total Haloacetic Acids HAA5 (ug/L) (CA1010005_DIS_**901**)	12/27/23	26	N/A	60	Byproduct of drinking water disinfection.
Distribution System Total Trihalomethanes TTHM (ug/L) (CA1010005_DST_**902**)	12/27/23	**120***	N/A	80	Byproduct of drinking water disinfection.
Distribution System Total Haloacetic Acids HAA5 (ug/L) (CA1010005_DIS_**902**)	12/27/23	20	N/A	60	Byproduct of drinking water disinfection.

**** Any violation of an MCL, MRDL, AL or TT is asterisked. Additional information regarding the violation is provided on the next page.***

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).

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. 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 (1-800-426-4791) or at http://www.epa.gov/lead.

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

Table 7. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
Arsenic (Raw)	The Raw water before treatment had a detection of 43ppb but after treatment running annual average was 4.59ppb.	Quarterly	Effective arsenic treatment in place.	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems and may have increased risk of getting cancer.
Arsenic (Treatment #1)	While the running annual average was 4.59ppb there	1 Week	Effective arsenic treatment in place.	Some people who drink water containing arsenic in

	was one detection of 10ppb.			excess of the MCL over many years may experience skin damage or circulatory system problems and may have increased risk of getting cancer.
Iron (Treatment #2)	On February 14th, 2023, the Iron test at treatment #2 came back at 600.	1 Week	Whenever iron test results are above the MCL, a retest will be taken within 48 hours.	Iron was found at levels that exceeded the secondary MCL of 300ug/L. The iron MCL was set to protect you against unpleasant fixtures (e.g. tubs and sinks) and clothing while washing. The high iron levels are due to leaching natural deposits.
Distribution System Total Trihalomethanes TTHM (ug/L) (CA1010005_DST_**901**)	On December 27th, 2023. System had a MCL exceedance of 130 ug/L.	1 Month	More frequent testing to monitoring TTHMs.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney or central nervous system problems and may have an increased risk of getting cancer.
Distribution System Total Trihalomethanes TTHM (ug/L) (CA1010005_DST_**902**)	On December 27th, 2023. System had a MCL exceedance of 120 ug/L.	1 Month	More frequent testing to monitoring TTHMs.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney or central nervous system problems and may have an increased risk of getting cancer.

Vulnerability Assessment Summary

WELL #11

The source is considered most vulnerable to the following activities not associated with any detected contaminants: 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 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 contaminants: 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 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 contaminants: Surface water bodies, automobile-gas stations, landfill/dumps, wastewater 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 the wells. The city provides treatment to reduce arsenic, iron, and manganese concentrations. The discharge from this well is blended with wells No.10,15 and 16 prior to treatment.

WELL #15

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: Schools. The source is considered most vulnerable to the following activities not associated with any detected contaminants: 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 contaminants 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 contaminants 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.