2020 Consumer Confidence Report

Water System Name: **City of Fresno Wastewater Management Division - #1 Water System** Report Date: 06/23/2021

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, 2020 and may include earlier monitoring data.

Type of water source(s) in use: Groundwater

Name & general location of source(s): Well#3A and Well#7 located at the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) 5607 W. Jensen Ave. Fresno, CA. 93706

Drinking Water Source Assessment information: A source assessment was conducted for the active water supply wells for the Fresno City Wastewater Plant 1W System in April 2002. Another source water assessment was conducted in February 2008 in connection with the permitting of Well#7. Two additional source water assessments were performed in August 2013 and May 2015.

The sources are considered most vulnerable to the following activities not associated with nay contaminates.
Automobile-Gas Stations
Historic Gas Stations
Wastewater Treatment Plants

A copy of the assessment may be viewed at:
Fresno/Clovis Regional Wastewater Reclamation Facility
5607 W. Jensen Ave. Fresno, Ca. 93706

Discussion of vulnerability:
The Wells are vulnerable to contamination associated with wastewater treatment plant and the sanitary sewer pipelines and reclamation sites surrounding the wastewater treatment plant. The most common contamination associated with wastewater treatment plants are elevated nitrate levels or bacteriological contamination. The wastewater treatment plant monitors the nitrate level in both wells annually to identify any elevated levels of nitrate. In addition, the sources are monitored monthly for total coliform and fecal coliform (bacteriological contamination). As a precaution, the wastewater treatment plant disinfects the water produced from both wells with Sodium Hypochlorite feed systems.

You may request a summary of the assessment be sent to you by contacting:
Cory Asher
Wastewater Manager
(559) 621-5170

Time and place of regularly scheduled board meetings for public participation:
There is no board meeting. However, plant personnel can bring up issues regarding the water system at any time, including weekly staff meetings or bi-weekly management staff meetings.

For more information, contact: Cory Asher, Wastewater Manager Phone: (559) 621-5170

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

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.

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.

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.

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 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.

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)	(In a month)		1 positive monthly sample[a]	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year)		A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive		Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year)		(b)	0	Human and animal fecal waste

(a) Two or more positive monthly samples is a violation of the MCL
(b) 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**	**90th Percentile Level Detected**	**No. Sites Exceeding AL**	**AL**	**PHG**	**No. of Schools Requesting Lead Sampling**	**Typical Source of Contaminant**
Lead (ppb)	7/1/20	5	0.002	0	15	0.2		Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7/1/20	5	0.252	0	1.3	0.3	Not applicable	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)	9/10/14	37.0		None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	9/10/14	199		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**
Gross Alpha Particle Activity (pCi/L) Well 3A	10/30/18	26.6		15	(0)	Erosion of natural deposits.
Gross Alpha Particle Activity (pCi/L) Well 7	5/9/18	14.8		15	(0)	Erosion of natural deposits.
Barium (ug/L) Well 3A Well 7	10/12/20 10/12/20	66.8 29.1		100 100	200 200	Discharge of oil drilling wastes and from metal refineries: erosion of natural deposits.
Chromium ug/L Well 3A Well 7	10/12/20 10/12/20	8.9 8.29		50 50	100 100	Discharge of steel and pulp mills and chrome plating: erosion of natural deposits.
Fluoride (mg/L): Well 3A Well 7	10/12/20 10/12/20	0.12 0.11		2 2	1 1	Erosion of natural deposits: water additive which promotes strong teeth: discharge from fertilizer and aluminum factories.
Arsenic (ug/L) Well 3A Well 7	10/12/20 10/12/20	1.53 2.07		10 10	0.004 0.004	Erosion of natural deposits: runoff from orchards: glass and electronics production wastes.
TTHMs (total) Trihalomethanes (ug/L)	9/5/18	9.5		80	N/A	By-product of drinking water chlorination.
Nitrate (as N): Well 3A (mg/L) Well 7	7/7/20 7/7/20	3.6 3.6		10 10	5 5	Runoff and leaching from fertilizer use: leaching from septic tanks and sewage: erosion of natural deposits
Nitrite Well 3A (mg/L) Well 7	7/7/20 7/7/20	ND ND		1.0 1.0	1.0 1.0	Discharge of oil drilling wastes and from metal refineries: erosion of natural deposits.
Chlorine (ppm)	2020	1.0		MRDL= 4.0 (as Cl2)	MRDLG= 4.0 (as Cl2)	Drinking water disinfection added for treatment.

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**
Total Dissolved solids (ppm)	9/20/17	236		1000		Erosion of natural deposits: runoff from orchards: glass and electronics production wastes.
Chloride (ppm)	9/10/15	17		500		Runoff/leaching from natural deposits: seawater influence
Specific Conductance	9/10/15	357		1600		Substances that form ions when in water: seawater influence.
Sulfate (ppb)	9/10/15	7.7		500		Runoff/leaching from natural deposits: industrial wastes.
1,2,3-Trichloropropane (1,2,3-TCP) : Well 3A	1/22/19	ND		.005	.0007	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites;
1,2,3-Trichloropropane (1,2,3-TCP) : Well 7	1/23/19	ND		.005	.0007	Used as cleaning and maintenance solvent, paint and varnish remover, and degreasing agent. Some people who drink water containing 1,2,3-

						TCP in access of the MCL over many years may have an increased risk of getting cancer.

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
Vanadium (ppb)	9/10/15	0.028		50	The babies of some pregnant women who drink water containing Vanadium in excess of the notification level may have an increased risk of developmental effects. Based on studies in laboratory animals.

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: 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. Fresno City Wastewater Plant 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

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
N/A				

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**
E. coli	(In the year)		0	(0)	Human and animal fecal waste
Enterococci	(In the year)		TT	N/A	Human and animal fecal waste
Coliphage	(In the year)		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
N/A

SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES
N/A

VIOLATION OF GROUNDWATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
N/A				

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**
N/A				

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 0 Level 1 assessment(s). 0 Level 1 assessment(s) were completed. In addition, we were required to take 0 corrective actions and we completed 0 of these actions.

During the past year 0] Level 2 assessments were required to be completed for our water system. 0 Level 2 assessments were completed. In addition, we were required to take 0 corrective actions and we completed 0 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 0 corrective actions and we completed 0 of these actions.