2018 Consumer Confidence Report

Water System Name: **City of Sanger** Report Date: June 30, 2019

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, 2018 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: The City of Sanger supplies potable water from City Wells.

Name & general location of source(s): Well 2A, Well 6, Well 7A, Well 8, Well 9, Well 11, Well 12, Well 14 and Well 25 are all located within the City of Sanger city limits.

Drinking Water Source Assessment information: Source water assessments were conducted in April 25, 2003 for Well 2A, Well 6, Well 7A, Well 8, Well 9, Well 11, and Well 12. A source water assessment was completed on June 25, 2007 for Well 25.

Time and place of regularly scheduled board meetings for public participation: The first and third Thursdays of the Month at 6 p.m. City Hall located at 1700 7th Street, Sanger, CA 93657

For more information, contact: John Mulligan, Public Works Director Phone: (559) 876-6300 ext.1250

Well 2A:

The source is considered most vulnerable to the following activities associated with detected contaminants: dry cleaners, photo processing/printing, automobile - body shops, automobile repair shops, machine shops, pesticide/fertilizer/petroleum storage & transfer areas, hospitals, crops, irrigated [berries, hops, mint, orchards, sod, greenhouses, fertilizer/pesticide/herbicide application, housing high density [>1 house/0.5 acres], parks, appliance/electronic repair, medical/dental offices/clinics, veterinary offices/clinics, apartments and condominiums, office buildings/complexes, and schools. The source is considered most vulnerable to the following activities not associated with any detected contaminants: historic gas stations. The following constituents were detected in the source: tetrachloroethylene (PCE), nitrate, total trihalomethanes, and dibromochloropropane (DBCP)

Discussion of Vulnerability:

The following constituents were detected in the source:

- Tetrachloroethylene
- Nitrate
- Trihalomethanes

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

Well 6:

The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum application. The source is considered most vulnerable to the following activities not associated with any detected contaminants: automobile - gas stations. The following constituents were detected in the source: dibromochloropropane (DBCP)

Discussion of Vulnerability:

The following constituents were detected in the source:

- Dibromochloropropane (DBCP)

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

Well 7A:

The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum application. The source is considered most vulnerable to the following activities not associated with any detected contaminants: automobile - gas stations. The following constituents were detected in the source: dibromochloropropane (DBCP)

Discussion of Vulnerability:

The following constituents were detected in the source:

- Tetrachloroethylene
- Dibromochloropropane (DBCP)
- Gross Alpha
- Nitrate

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

Well 8:

The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum storage & transfer areas; veterinary offices/clinics; automobile - body shops; automobile - repair shops; crops, irrigated [berries, hops, mint, orchards, sod, greenhouses]; fertilizer/pesticide/herbicide application; housing - high density [>1 house/0.5 acres]; parks; septic systems - high density [>1/acre]; apartments and condominiums; medical/dental offices/clinics; schools; septic systems - low density [<1/acre]. The source is considered most vulnerable to the following activities not associated with any detected contaminants: automobile – gas stations. The following constituents were detected in the source: arsenic, nitrate, total trihalomethanes, gross alpha, dibromochloropropane (DBCP). DBCP is a pesticide that was used on vineyards prior to 1979. The City had installed granular activated carbon (GAC) for the removal of DBCP from the water produced by Well No. 8 but no longer provides GAC treatment as the well is classified as a standby source.

Discussion of Vulnerability:

The following constituents were detected in the source:

Nitrate
Nitrite
Gross Alpha
Dibromochloropropane (DBCP)

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

DBCP is a pesticide that was used on vineyards prior to 1979. The City has installed granular activated carbon (GAC) for the removal of DBCP from the water produced by Well 8.

Well 9:

The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum storage & transfer areas; veterinary offices/clinics; automobile - body shops; automobile - repair shops; crops, irrigated [berries, hops, mint, orchards, sod, greenhouses]; fertilizer/pesticide/herbicide application; housing - high density [>1 house/0.5 acres]; parks; septic systems - high density [>1/acre]; apartments and condominiums, medical/dental offices/clinics; schools; septic systems - low density [<I/acre]. The source is considered most vulnerable to the following activities not associated with any detected contaminants: automobile – gas stations. The following constituents were detected in the source: arsenic, nitrate, total trihalomethanes, gross alpha, and dibromochloropropane (DBCP). DBCP is a pesticide that was used on vineyards prior to 1979. The City has installed granular activated carbon (GAC) for the removal of DBCP from the water produced by Well No.9.

Discussion of Vulnerability:

The following constituents were detected in the source:

Dibromochloropropane (DBCP)

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

DBCP is a pesticide that was used on vineyards prior to 1979. The City has installed granular activated carbon (GAC) for the removal of DBCP from the water produced by Well 9.

Well 11:

The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum storage & transfer areas; automobile - body shops; automobile - repair shops; machine shops; fertilizer/pesticide/herbicide application; and schools. The source is considered most vulnerable to the following activities not associated with any detected contaminants: septic systems -high density [>1/acre]. The following constituents were detected in the source: arsenic; and dibromochloropropane (DBCP).

Discussion of Vulnerability:

The following constituents were detected in the source:

Dibromochloropropane (DBCP)

These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

Well 12:
The source is considered most vulnerable to the following activities associated with detected contaminants: pesticide/fertilizer/petroleum storage & transfer areas; and fertilizer/pesticide/herbicide application. The source is considered most vulnerable to the following activities not associated with any detected contaminants: septic systems low density [<1/acre; wells agricultural/irrigation; and automobile – gas stations. The following constituents were detected in the source: dibromochloropropane (DBCP)

Discussion of Vulnerability:
The following constituents were detected in the source: Dibromochloropropane (DBCP)
These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

Well 14:
The source is considered most vulnerable to the following activities not associated with any detected contaminants: automobile - body shops; automobile- repair shops; junk/scrap/salvage yards; lumber processing and manufacturing; machine shops; septic systems - low density [<1/acre]; wood/pulp/paper processing and mills; automobile - gas stations; and metal plating/ finishing/fabricating. This well has had DBCP detected at levels higher than the MCL. There are no potential contaminating activities associated with this well that could account for the high DBCP levels.

Discussion of Vulnerability:
This well has had Dibromochloropropane (DBCP) detected at levels higher than the MCL. There are no PCAs associated with this well that could account for the high DBCP levels.

Well 25:
The source is considered most vulnerable to the following activities not associated with any detected contaminants: storm drain discharge points; storm water detention facilities; transportation corridors -road right-of-ways [herbicide use areas]; and wells -water supply

Discussion of Vulnerability:
The following constituents were detected in the source:
Dibromochloropropane (DBCP)
These constituents were found after running the trigger report from the Water Quality Inquire and from the DHS system files.

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 (USEPA).

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.

Variances 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 by-products 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 USEPA 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)	(In a mo.) 1	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year) 0	0	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)	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**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	September 2016	30	2.8 ppb	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	September 2016	30	0.064 ppm	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**	**Average Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	May 2017	14.8	6.1 – 33.0	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	May 2017	111.9	40 - 290	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**	**Average Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Nitrate (as nitrogen, N)	2018	2.8 mg/L	ND – 8.6 mg/L	10 mg/L	10 mg/L	Runoff and leaching from fertilizer use ; leaching from septic tanks, sewage, erosion of natural deposits
Dibromochloropropane (DBCP)	2018	0.037 ug/L	ND – 0.22* ug/L	0.2 ug/L	0.0017 ug/L	Banned nematode that may still be present in soils due to runoff / leaching from former use on soybeans, cotton, vineyards, tomatoes and tree fruit
TTHM's (Total trihalomethanes)	2018	1.8 ug/L	ND – 3.6 ug/L	80 ug/L	N/A	By-Product of drinking water chlorination
HAA5 (Haloacetic Acids Five)	2018	ND	ND	60 ug/L	N/A	By-Product of drinking water chlorination
1, 2, 3 TCP (1,2,3-Trichloropropane)	2018	0.0021 µg/L	ND – 0.017* µg/L	0.005 µg/L	0.0007 µg/L	Some people who use water containing 1,2,3 TCP in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals
PCE (Tetrachloroethylene)	2018	ND	ND	5 ug/L	0.5 ug/L	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Gross Alpha Activity	2017	8.4 pCi/L	8.4 pCi/L	15 pCi/L	N/A	Erosion of natural deposits
Uranium	2017	19.0 pCi/L	19.0 pCi/L	20 pCi/L	1.0 pCi/L	Erosion of natural deposits
Chlorine Residual	2018	0.86 mg/L	0.60 – 1.19 mg/L	4.0 mg/L	N/A	Added to drinking water for disinfection

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Average Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chloride	2017	4.3 mg/L	ND – 35.0 mg/L	500 mg/L	N/A	Runoff / leaching from natural deposits; seawater influence
Specific Conductivity	2017	313 umhos	120 – 610 umhos	1600 umhos	N/A	Substances that form ions when in water; seawater influence
Sulfate	2017	30.2 mg/L	4.5 – 110 mg/L	500 mg/L	N/A	Runoff / leaching from natural deposits; industrial waste
Total Dissolved Solids (TDS)	2017	212 mg/L	94 – 470 mg/L	1000 mg/L	N/A	Runoff / leaching from natural deposits
Turbidity	2017	0.06 units	ND – 0.15 units	5 units	N/A	Soil runoff

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**

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 USEPA'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. USEPA/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 Sanger 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.

*Well 8 is currently offline on emergency stand-by due to elevated DBCP levels. The well was used July 1 – Sept. 30.

2017 sampling did detect arsenic, fluoride (natural source), and odor, in wells 12, 14, & 25 - all were below the MCL.

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**

For Water Systems Providing Ground Water as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER 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	(0)	Human and animal fecal waste
Enterococci	(In the year) 0		TT	n/a	Human and animal fecal waste
Coliphage	(In the year) 0		TT	n/a	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE

SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES

VIOLATION OF GROUND 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 [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.