

2016 Consumer Confidence Report

Water System Name: City of Sanger Report Date: June 30, 2017

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, 2016 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: A source water assessment was conducted for Well 2A, Well 6, Well 7A, Well 8, Well 9, Well 11, Well 12, and 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 [<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, 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 [$> 1/\text{acre}$]. 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 [$<1/\text{acre}$]; 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 [$<1/\text{acre}$]; 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.

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 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.) 0	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (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 <i>E. coli</i> positive		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(from 4/1/16-12/31/16) 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)	September 2016	30	2.8 ppb	0	15 ppb	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 ppm	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)	May 2014	14.7	6.1 – 33.0	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	May 2014	111.8	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	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Nitrate (as nitrogen, N)	2016	3.1 mg/L	ND – 8.8 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)	2016	0.054 µg/L Average of highest level after trtmt in 2016	0.010 – 0.10 µg/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)	2016	2.9 ug/L	2.8 – 3.0 ug/L	80 ug/L	N/A	By-Product of drinking water chlorination

HAA5 (Haloacetic Acids Five)	2016	0.5 ug/L	ND – 1.0 ug/L	60 ug/L	N/A	By-Product of drinking water chlorination
PCE (Tetrachloroethylene)	2016	ND	ND	5 ug/L	0.5 ug/L	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Gross Alpha Activity	2016	11.8 pCi/L	5.0 – 16* pCi/L	15 pCi/L	N/A	Erosion of natural deposits
Uranium	2016	9.3 pCi/L	1.0 – 23.0* pCi/L	20 pCi/L	1.0 pCi/L	Erosion of natural deposits
Chlorine Residual	2016	0.78 mg/L	0.55 – 1.18 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	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride	2014	7.2 mg/L	ND – 35.0 mg/L	500 mg/L	N/A	Runoff / leaching from natural deposits; seawater influence
Specific Conductivity	2014	261 µmhos	120 – 160 µmhos	1600 µmhos	N/A	Substances that form ions when in water; seawater influence
Sulfate	2014	20.2 mg/L	4.5 – 56.0 mg/L	500 mg/L	N/A	Runoff / leaching from natural deposits; industrial waste
Total Dissolved Solids (TDS)	2014	180 mg/L	94 – 380 mg/L	1000 mg/L	N/A	Runoff / leaching from natural deposits
Turbidity	2014	0.04 units	ND – 0.14 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
1, 2, 3 TCP (Trichloropropane)	2016	3.6 ng/L	ND – 16.7 ng/L	5 ng/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

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>.