# 2022 Consumer Confidence Report

## Water System Information

Water System Name: **City of Sanger** Report Date: **June 30, 2023**

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, 2022 through December 31, 2022 and may include earlier monitoring data.

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse con City of Sanger a 559-876-6300 para asistirlo en español.

Type of Water Source(s) in Use: The City of Sanger supplies potable water from City Wells.

Name and General Location of Source(s): Well 2a, Well 6, Well 7a, Well 8, Well 9, Well 11, Well 12, Well 14, Well 16, Well 25. All City Wells are located within the City of Sanger city limits.

Drinking Water Source Assessment Information: A source assessment was conducted for Well 2a, Well 6, Well 7a, Well 8, Well 9, Well 11, Well 12, Well 14, and Well 25.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: The 1st and 3rd Thursday of the month at 6:00 pm. City Hall located at 1700 7th Street, Sanger, CA 93657.

For More Information, Contact: John Mulligan, Public Works Director, Phone: 559-876-6300 x 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

| 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 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). |
| 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. |
| 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 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

Complete if bacteria are detected.

| Microbiological Contaminants | Highest No. of Detections | No. of Months in Violation | MCL | MCLG | Typical Source of Bacteria |
|---|---|---|---|---|---|
| *E. coli* | (In the year) 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

Complete if lead or copper is detected in the last sample set.

| Lead and Copper | Sample Dates | 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) | 8/28/22 to 10/6/22 | 30 | 0 | 1 | 15 | 0.2 | 0 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | 8/28/22 to 10/6/22 | 30 | 0 | 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 Dates | Average Level Detected | Range of Detections | MCL | PHG (MCLG) | Typical Source of Contaminant |
|---|---|---|---|---|---|---|
| Sodium (ppm) | 2017 - 2020 | 12.7 | 5.4 – 30.0 | None | None | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | Various times in 2017 - 2020 | 80.9 | 35 - 210 | 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 N (mg/L) * | 2022 | 3.11 mg/L | 0.42 – 8.7 mg/L | 10 mg/L | 10 mg/L | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Dibromochloropropane [DBCP] (ng/L) ** | 2022 | 8 ng/L | ND – 45 ng/L | 200 ng/L | 3 ng/L | Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit |
| 1,2,3-Trichloropropane [TCP] ** | 2022 | 4 ng/L | ND – 7.6 ng/L | 5 ng/L | 0.7 ng/L | Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides. |

Footnotes:

* The City has a nitrate blending facility that blends Well 8 water with distribution system water to reduce nitrate originating from Well 8.

** The City uses granular activated carbon (GAC) treatment facilities to remove Dibromochloropropane (DBCP) and 1,2,3-Trichloropropane (TCP), from well sites 2A, 7A, 9, 14, and 25.

| | | | | | | |
|---|---|---|---|---|---|---|
| TTHMs [Total Trihalomethanes] (µg/L) | 2021 | 2.1 (ug/L) | ND – 2.1 (ug/L) | 80 ug/L | n/a | Byproduct of drinking water disinfection |
| HAA5 [Sum of 5 Haloacetic Acids] (µg/L) | 2021 | ND | ND | 60 ug/L | n/a | Byproduct of drinking water disinfection |
| Tetrachloroethylene (PCE) (µg/L) | 2020 - 2022 | 0.21 ug/L | ND – 2.4 ug/L | 5 ug/L | 0.06 ug/L | Discharge from factories, dry cleaners, and auto shops (metal degreaser) |
| Chlorine Residual (mg/L) | 2022 | 0.96 mg/L | 0.40 – 1.60 mg/L | 4.0 mg/L | n/a | Drinking water disinfectant added for treatment |
| Gross Alpha Particle Activity (pCi/L) | 2013 - 2020 | 3.4 (pCi/L) | ND – 10 (pCi/L) | 15 (pCi/L) | n/a | Erosion of natural deposits |
| Uranium (pCi/L) | 2016 - 2017 | 8.06 (pCi/L) | 1.34 – 19 (pCi/L) | 20 (pCi/L) | 1.0 (pCi/L) | Erosion of natural deposits |
| Arsenic (µg/L) | 2017 - 2020 | 1.9 ug/L | ND – 4.3 ug/L | 10 ug/L | 0.004 ug/L | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Fluoride (mg/L) | 2020 | .15 mg/L | ND – 0.21 ug/L | 2.0 mg/L | 1 mg/L | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |

**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 | 2020 | 5.7 mg/L | ND – 22.0 mg/L | 500 mg/L | n/a | Runoff / leaching from natural deposits; seawater influence |
| Specific Conductance | 2020 | 224 µS/cm | 81 – 510 µS/cm | 1,600 µS/cm | n/a | Substances that form ions when in water; seawater influence |

| | | | | | | |
|---|---|---|---|---|---|---|
| Sulfate | 2020 | 17.3 mg/L | 3.3 – 48 mg/L | 500 mg/L | n/a | Runoff / leaching from natural deposits; industrial waste |
| Total Dissolved Solids [TDS] | 2020 | 154 mg/L | 83 – 320 mg/L | 1000 mg/L | n/a | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 2020 | 0.12 units | 0.10 – 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 |
|---|---|---|---|---|---|
| n/a | | | | | |

## 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. 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. 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.

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness: symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies, If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. There are no nitrate exceedances for the report period.

## 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 |
|---|---|---|---|---|
| n/a | | | | |