

2022 Consumer Confidence Report

Water System Information

Water System Name: Sierra Army Depot

Report Date: 06 June 2023

Type of Water Source(s) in Use: Groundwater

Name and General Location of Source(s): Well 12, Well 05, Well 08. Located on Sierra Army Depot.

Drinking Water Source Assessment Information: The Public Health Command, Fort Lewis Washington, conducted a water assessment survey on our sources in April 2013. Our sources are considered most vulnerable to the following activities: Military installations, historic and active automobile gas stations, and chemical/petroleum processing/storage. Our sources are considered most vulnerable to the following activities associated with the detection of nitrate: animal operations, monitoring well/test holes.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: N/A

For More Information, Contact: Thomas Humphreys (530) 827-5242

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, 2022 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 <i>E. coli</i> 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).

Term	Definition
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.
Variations 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
<i>E. coli</i>	2022 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 Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	2020	10	<0.001	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2020	10	0.12	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)			76-100	None	None	Salt present in the water and is generally naturally occurring
Well 05	2021	76				
Well 08	2012	62				
Well 12	2017	57				
Distribution system	2022	100				
Hardness (ppm)			65-480	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring
Well 05	2021	280				
Well 08	2012	290				
Well 12	2020	65				
Distribution system	2022	480				

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
Aluminum (mg/L) Well 05 Well 08 Well 12	2021 2012 2016	<0.05 <0.05 <0.05	0.05-0.05	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes.
Antimony (µg/L) Well 05 Well 08 Well 12	2021 2012 2016	1.0 <1.0 <1.0	1.0 – 1.0	6	1	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Arsenic (µg/L) Well 05 Well 08 Well 12	2023 2012 2023	4.0 2.0 4.0	2.0 – 4.0	10	0.004	Erosion of natural deposits, runoff from orchards.
Barium (mg/L) Well 05 Well 08 Well 12	2021 2012 2016	0.047 0.067 <0.001	<0.001-0.067	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.
Beryllium (µg/L) Well 05 Well 08 Well 12	2021 2012 2016	<1.0 <1.0 1.0	1.0 – 1.0	4	1	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries.
Cadmium (µg/L) Well 05 Well 08 Well 12	2021 2012 2016	<1.0 <1.0 1.0	1.0 – 1.0	5	5.0	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from

						electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints.
Chromium (Total)(µg/L)			1.0 – 2.0	50	100	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits.
Well 05	2021	2.0				
Well 08	2012	<1.0				
Well12	2016	2.0				
Fluoride (mg/L)			0.40 – 0.60	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Well 05	2021	0.40				
Well 08	2012	0.60				
Well 12	2016	0.60				
Gross Alpha (pCi/L)			3.30 – 20.3	15	0	Erosion of natural deposits.
Well 05	2015	3.30				
Well 08	2015	4.66				
Well 12	2016	2.05				
Mercury (µg/L)			ND – ND	2	12	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland.
Well 05	2019	<1				
Well 08	2012	<0.2				
Well 12	2023	<0.1				
Nickel (µg/L)			1.0 – 10	100	12	Erosion of natural deposits; discharge from metal factories.
Well 05	2021	10				
Well 08	2012	1.0				
Well 12	2016	1.0				
Nitrate – as N (mg/L)			ND – 2.30	10	10	Leaching from fertilizer use, septic tanks, erosion of
Well 05	2023	<0.05				
Well 08	2023	2.30				
Well 12	2023	0.55				

						natural deposits.
Perchlorate (µg/L)			<2.0 - <2.0	6	1	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Well 05	2023	<2.0				
Well 08	2022	<2.0				
Well 12	2023	<2.0				
Radium – 228 (pCi/L)			0.172 – 0.692	5	0.05	Decay of natural and man-made deposits.
Well 05	2015	0.172				
Well 08	2015	0.500				
Well 12	2016	0.692				
Selenium (µg/L)			5.0 – 7.0	50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive).
Well 05	2021	7.0				
Well 08	2012	<5.0				
Well 12	2016	<5.0				

Thallium (µg/L)			0.50 – 0.50	2	0.1	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories.
Well 05	2021	<1.0				
Well 08	2012	<0.5				
Well 12	2016	<0.5				
Uranium (pCi/L)			<1.0 – 30.7	20	0.43	Erosion of natural deposits.
Well 05 - Raw	2019	<1.0				
Well 05 - Treated	2018	<1.0				
Well 08 – Raw	2018	30.7				
Well 08 - Treated	2018	20.7				
Well 08 - Blended	2018	11.3				
Well 12 – Raw	2019	<1.0				

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)			14 – 38	15	None	Naturally-occurring organic materials.
Well 05	2021	26				
Well 08	2012	38				
Well 12	2016	14				
Color (Color Units)			ND - 50	15	None	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Well 05	2020	50				
Well 08	2017	<15				
Well 12	2017	<15				
Copper (mg/L)			0.002 – 0.005	500	None	Municipal and industrial waste discharges.
Well 05	2019	0.005				
Well 08	2017	0.002				
Well 12	2019	0.005				
Foaming Agents (µg/L)			ND – ND	300	None	Leaching from natural deposits; industrial wastes.
Well 05	2015	<0.5				
Well 08	2015	<0.5				
Well 12	2016	<0.1				
Iron (µg/L)			ND - 2200	50	None	Leaching from natural deposits.
Well 05 - Raw	2021	2200				

Well 08 - Raw	2018	<100				
Well 12 – Raw	2021	<50				
Well 05 – Treated	2023	<50				
Well 08 – Treated	2021	<100				
Well 12 - Treated	2023	<50				
Manganese (µg/L)			<1.0 - 2200	100	None	Industrial discharges.
Well 05 - Raw	2019	2200				
Well 08 - Raw	2018	100				
Well 12 – Raw	2021	39				
Well 05 – Treated	2023	2				
Well 08 – Treated	2018	14				
Well 12 - Treated	2023	<1.0				
Silver (µg/L)			ND – ND	5.0	None	Runoff/leaching from natural deposits; industrial wastes.
Well 05	2021	<10				
Well 08	2012	<1.0				
Well 12	2016	<1.0				
Sulfate (mg/L)			45 – 190	1000	None	Runoff/leaching from natural deposits.
Well 05	2021	170				
Well 08	2012	190				
Well 12	2016	45				
Total Dissolved Solids(TDS)(mg/L)			300 - 850	500	None	Runoff/leaching from natural deposits.
Well 05	2020	520				
Well 08	2020	850				
Well 12	2017	300				
Zinc (mg/L)			ND – 0.03	500	None	Runoff/leaching from natural deposits; industrial wastes.
Well 05	2022	0.03				
Well 08	2022	0.02				
Well 12	2016	<0.01				

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. [Enter Water System's Name] 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>.

Additional Special Language for Nitrate, Arsenic, Lead, Radon, and *Cryptosporidium*: [Enter Additional Information Described in Instructions for SWS CCR Document]

State Revised Total Coliform Rule (RTCR): [Enter Additional Information Described in Instructions for SWS CCR Document]

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
No violations in 2022				

For Water Systems Providing Groundwater as a Source of Drinking Water

Table 8. 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
<i>E. coli</i>	2022 0	Jan – Dec 2022	0	(0)	Human and animal fecal waste
Enterococci	2022 N/A		TT	N/A	Human and animal fecal waste
Coliphage	2022 0	Jan – Dec 2022	TT	N/A	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT

Special Notice of Fecal Indicator-Positive Groundwater Source Sample: N/A

Special Notice for Uncorrected Significant Deficiencies: N/A

Table 9. Violation of Groundwater TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
N/A				

For Systems Providing Surface Water as a Source of Drinking Water

Table 10. Sampling Results Showing Treatment of Surface Water Sources

N/A SIAD does not have surface water supply sources.	
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(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

Table 11. Violation of Surface Water TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
N/A				

Summary Information for Operating Under a Variance or Exemption

[Enter Additional Information Described in Instructions for SWS CCR Document]

Summary Information for Revised Total Coliform Rule Level 1 and Level 2 Assessment Requirements

If a water system is required to comply with a Level 1 or Level 2 assessment requirement that is not due to an *E. coli* MCL violation, include the following information below [22 CCR section 64481(n)(1)].

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.

The water system shall include the following statements, as appropriate:

SIAD is not in level 1 or level 2.

If the water system failed to complete all the required assessments or correct all identified sanitary defects, the water system is in violation of the treatment technique requirement and shall include the following statements, as appropriate:

N/A

[For Violation of the Total Coliform Bacteria TT Requirement, Enter Additional Information Described in Instructions for SWS CCR Document]

If a water system is required to comply with a Level 2 assessment requirement that is due to an *E. coli* MCL violation, include the information below [22 CCR section 64481(n)(2)].

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.

SIAD is not in level 2.

If a water system failed to complete the required assessment or correct all identified sanitary defects, the water system is in violation of the treatment technique requirement and shall include the following statements, as appropriate:

N/A

If a water system detects *E. coli* and has violated the *E. coli* MCL, include one or more the following statements to describe any noncompliance, as applicable:

N/A

[If a water system detects *E. coli* and has not violated the *E. coli* MCL, the water system may include a statement that explains that although they have detected *E. coli*, they are not in violation of the *E. coli* MCL.]