2021 Consumer Confidence Report

Water System Information

Water System Name: Cuyamaca Water District CA3700074

Report Date: 5/31/2022

Type of Water Source(s) in Use: Ground water from well 1, well 5 and well 6

Name and General Location of Source(s): Well 1 (CA3700074-001-001) Engineers, Well 5 (CA3700074-005-005) Arappahoe Well 6 (3700074-006-006) Merz

Drinking Water Source Assessment Information: On file with DEH

Time and Place of Regularly Scheduled Board Meetings for Public Participation: 4th Monday of the month at fire station tender building.

For More Information, Contact: Ron Brown (760)315-1070

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, 2021 and may include earlier monitoring data. 4pm

Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [Enter Water System's Name] a [Enter Water System's Address or Phone Number] para asistirlo en español.

Language in Mandarin: 这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [Enter Water System Name]以获得中文的帮助: [Enter Water System's Address][Enter Water System's Phone Number].

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [Enter Water System's Name and Address] o tumawag sa [Enter Water System's Phone Number] para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [Enter Water System's Name] tại [Enter Water System's Address or Phone Number] để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [Enter Water System's Name] ntawm [Enter Water System's Address or Phone Number] rau kev pab hauv lus Askiv.

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 1.A. Compliance with Total Coliform MCL between January 1, 2021 and June 30, 2021 (inclusive)

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a month) 0	0	1 positive monthly sample (a)	0	Naturally present in the environment
Fecal Coliform and *E. coli*	(in the year) 0	0	0	None	Human and animal fecal waste

(a) For systems collecting fewer than 40 samples per month: two or more positively monthly samples is a violation of the total coliform MCL

For violation of the total coliform MCL, include potential adverse health effects, and actions taken by water system to address the violation:

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	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	2/16/2021	2	.1ug/L	0	15 ug/L	0.2	0	Internal corrosion of household water plumbing systems; discharges from

Lead and Copper	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
								industrial manufacturers; erosion of natural deposits
Copper (ppm)	2/16/2021	2	.065mg /L	0	1.3 mg /L	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)	12/13/2021	7.63mg/l	7.63 to 10.20	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	12/13/2021	243	233 to 243	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
Asbestos	12/01/2021	NSD	NSD	7MFL	7MFL	**Dissolution of asbestos-containing minerals and ores** is the principal natural source of asbestos fibres in water. Known anthropogenic sources include industrial effluents, air pollution, and corrosion of A/C pipes in water distribution systems.
Antimony	12/01/2021	ND	ND	.006	.0001	it can enter drinking water **as a result of the weathering of rocks and soils, from wastewater from some manufacturing processes or by leaching from solder in plumbing joints**.
Arsenic	12/01/2021	.0001	.0001	.01	.000004	Arsenic occurs naturally in the earth's crust. Most arsenic in drinking water comes from **natural rock formations**. As water flows through these formations, it can dissolve arsenic and carry it into underground aquifers, streams, or rivers that may become drinking water supplies.
Barium	12/01/2021	.031	.003 to .31	1	2	Barium is a metal that occurs

						naturally in certain types of **igneous and sedimentary rocks**. Barium can enter the groundwater and well water when rocks that contain barium break down and dissolve. Barium can combine with other chemicals to form compounds.
Beryllium,Total	12/01/2021	ND	ND	.004	.001	The primary source of beryllium compounds in water appears to be release from **coal burning and other industries using beryllium**. Other sources of beryllium in surface water include deposition of atmospheric beryllium and weathering of rocks and soils containing beryllium.
Cadmium	12/01/2021	ND	ND	.005	.00004	Cadmium is found in drinking water supplies as a result of **deterioration of galvanized plumbing, along with industrial waste contamination, or surface water contamination by certain fertilizers**...
Chromium	12/01/2021	.0002	.0002 to .0003	.05	.01	Discharge of dye and paints and other wastes
Fluoride	12/01/2021	.068	.041 to .068	2	1	major sources of CrVI in drinking water are **discharges from steel and**

						pulp mills, metal plating operations, boiler water corrosion control applications and erosion of natural deposits of trivalent chromium which later become oxidized.
Lead	12/01/2021	.0004	ND to .0004	.015	.0002	the most common sources of lead in drinking water are **lead pipes, faucets, and plumbing fixtures**. Certain pipes that carry drinking water from the water source to the home may contain lead. Household plumbing fixtures, welding solder, and pipe fittings made prior to 1986 may also contain lead.
Nickel	12/01/2021	.0006	ND to .0006	.1	.012	Nickel is released into the environment by **power plants, metal factories and waste incinerators**. It is also used in fertilizers and enters groundwater from farm runoff. Nickel can be up 60% recyclable.
Mercury	12/01/2021	ND	ND	.002	.0012	There are many ways that mercury can get into your drinking water: **Rain and snow** can carry mercury from the air into surface waters supplies such as lakes, rivers and reservoirs. Mercury can seep into underground water supplies from

						industrial and hazardous waste sites.
Perchlorate	12/01/2021	ND	ND	.006	.001	Perchlorate occurs naturally in **arid states in the Southwest United States, in nitrate fertilizer deposits in Chile, and in potash ore in the United States and Canada**.
Cyanide	12/01/2021	ND	ND	.15	.15	The major sources of cyanides in water are **discharges from some metal mining processes, organic chemical industries, iron and steel plants or manufacturers, and publicly owned wastewater treatment facilities**.
Nitrate as N	12/01/2021	1.260	.01 to 1.26	10	10	Nitrate is in many fertilizers used on yards, golf courses, and crops. Other sources of nitrate include **discharge from sewage systems and animal wastes**. Natural processes can cause low levels of nitrate in drinking water—usually less than 3 mg/L.
Nitrite	12/01/2021 12/13/2021	ND	ND	1	1	The principle sources of nitrate

						contamination in water are thus **fertilizers, animal waste and septic tanks**. The water supplies most vulnerable to nitrate contamination are in agricultural areas and in well waters having a close or hydraulic relationship to septic tanks.
Selenium	12/01/2021	ND	ND	.05	.03	Selenium in drinking water can come from **discharge from mines, natural deposits, dischage from refineries, or from agricultural runoff leaching natural selenium compounds from dry, undeveloped land**.
Thallium, Total	12/01/2021	ND	ND	.002	.0001	Man-made sources of thallium pollution are gaseous emission of cement factories, coal-burning power plants, and metal sewers. **The leaching of thallium from ore processing operations** is the major source of elevated thallium concentrations in water.
Gross Alpha Particle Activity	12/13/2021	.236	.236 to 2.46	15	N/A	Gross alpha radiation, uranium and radium can get into your drinking water **if your well is drilled into or near bedrock containing radioac tive elements**. The amount of gross

						alpha radiation in water varies because the Earth's bedrock contains varying amounts of radioactive elements.
1,1,1-Trichloroethane	12/13/2021 6/15/2021	ND	ND	.2	.1	Trichloroethylene is a colorless or blue liquid that smells similar to chloroform and is used as a degreaser and in the production of textiles. 1 It is nonflammable and highly volatile. Trichloroethylene can enter drinking water through **leaks, evaporation and spills from industrial storage tanks**.
1,1,2,2-Tetrachloroethane	12/13/2021 6/15/2021	ND	ND	.001	.0001	Tetrachloroethylene, also known as perchloroethylene, PCE, PERC, and tetrachloroethene, is a chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. This chemical can get into well water when **groundwater comes in contact with a spill or other release to the environment**.
1,1,2-Trichlororthane	12/13/2021 6/15/2021	ND	ND	.005	.0003	Trichloroethylene is a colorless or blue liquid that smells similar to chloroform and is used as a degreaser and in the production of textiles. 1 It is nonflammable and highly volatile. Trichloroethylene

						can enter drinking water through **leaks, evaporation and spills from industrial storage tanks**.
1,1-Dichloroethane	12/13/2021 6/15/2021	ND	ND	.005	.0003	In the Pacific Northwest it is uncommon to find 1,1-DCA in drinking water or surface water. It is assumed that its presence, when found, is due to inadvertent spilling or inappropriate disposal of wastes containing industrial solvents. Some solvents are able to travel long distances through soil and to enter wells and/or surface water. The behavior of 1,1-DCA in soil is not well understood at this time.
1,1-Dichloroethylene	12/13/2021 6/15/2021	ND	ND	.006	.01	In the Pacific Northwest it is uncommon to find 1,1-DCA in drinking water or surface water. It is assumed that its presence, when found, is due to inadvertent spilling or inappropriate disposal of wastes containing industrial solvents. Some solvents are able to travel long distances through soil and to enter wells and/or surface water. The behavior of 1,1-DCA in soil is not well understood at this time.
1,2,4-Trichlorobenzene	12/13/2021 6/15/2021	ND	ND	.005	.005	1,2,4-Trichlorobenzene (1,2,4-TCB) binds well to the soil and

						therefore will not leach appreciably to the groundwater when released to land. However, 1,2,4-TCB has been detected in some groundwater samples which indicates that it can be transported there by some process. If released to water it will largely evaporate within a few hours. It has some potential to accumulate in fish.
0-Dichloroethane	12/13/2021 6/15/2021	ND	ND	.6	.6	In the Pacific Northwest it is uncommon to find 1,1-DCA in drinking water or surface water. It is assumed that its presence, when found, is due to inadvertent spilling or inappropriate disposal of wastes containing industrial solvents. Some solvents are able to travel long distances through soil and to enter wells and/or surface water. The behavior of 1,1-DCA in soil is not well understood at this time.
1,2-Dichloropropane	12/13/2021 6/15/2021	ND	ND	.005	.0005	1,2-DCP released to soil will largely evaporate. However, it has been detected in groundwater. Releases to surface water will also evaporate, and are

						not likely to accumulate in aquatic life.
1,3-Dichloropropene	12/13/2021 6/15/2021	ND	ND	.0005	.0002	1,2-DCP released to soil will largely evaporate. However, it has been detected in groundwater. Releases to surface water will also evaporate, and are not likely to accumulate in aquatic life.
P-Dichlorobenzene	12/13/2021 6/15/2021	ND	ND	.005	.006	these compounds are produced as by-products of chlorinated solvent production methods and combustion processes, including natural **sources**.
Benzene	12/13/2021 6/15/2021	ND	ND	.001	.00015	**Leakage from underground gasoline storage tanks or from landfills and hazardous waste sites** that contain benzene can result in benzene contamination of well water . People with benzene-contaminated tap water can be exposed from drinking the water or eating foods prepared with the water .
Carbon Tetrachloride	12/13/2021 6/15/2021	ND	ND	.0005	.0001	Carbon tetrachloride is a manufactured chemical and does not occur naturally in the environment. It is produced by **chlorination of a variety of low molecular weight hydrocarbons**

						such as carbon disulfide, methane, ethane, propane, or ethylene dichloride and also by thermal chlorination of methyl chloride.
CIS-1,2-Dichloroethylene	12/13/2021 6/15/2021	ND	ND	.006	.013	Leaching
Dichloromethane	12/13/2021 6/15/2021	ND	ND	.005	.004	Leaching
Ethylbenzene	12/13/2021 6/15/2021	ND	ND	.3	.3	Ethylbenzene is **not often found in drinking water**. Higher levels may be found in residential drinking water wells near landfills, waste sites, or leaking underground fuel storage tanks. ❑ Working in an industry where ethylbenzene is used or made.
Methyl Tert-Butyl Ether	12/13/2021 6/15/2021	ND	ND	.013	.013	The most likely sources of the groundwater contamination are **leaking underground storage tanks and pipelines**.
Chlorobenzene(Monochlorobenzene)	12/13/2021 6/15/2021	ND	ND	.07	.07	Benzene enters water as **discharge from industrial factories or leaching from landfills and gas storage tanks**.
Styrene	12/13/2021 6/15/2021	ND	ND	.1	.0005	Styrene is often detected in urban air. It can be found indoors as a result of **operating photocopiers and laser printers, and from cigarette**

						smoke. Small amounts may be eaten when styrene migrates into foods from packaging made of polystryrene.
Tetrachloroethylene	12/13/2021 6/15/2021	ND	ND	.005	.00006	Tetrachloroethylene, also known as perchloroethylene, PCE, PERC, and tetrachloroethene, is a chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. This chemical can get into well water when **groundwater comes in contact with a spill or other release to the environment**.
Toluene	12/13/2021 6/15/2021	ND	ND	.15	.15	Toluene released to soil will be lost **by evaporation from near-surface soil and by leaching to the groundwater**. Its breakdown by soil microbes is slow.
Trans-1,2-Dichloroethylene	6/15/2021	ND	ND	.01	.05	Leaching
Trichloroethylene	12/13/2021 6/15/2021	ND	ND	.005	.0017	Leaks for industrial storage tanks
Trichloro trifluoroethane	12/13/2021 6/15/2021	ND	ND	.15	1.3	Leaching
Vinyl Chloride	12/13/2021 6/15/2021	ND	ND	.0005	.00005	Land fill runoff
Xylenes, Total	12/13/2021 6/15/2021	ND	ND	1.750	1.8	Xylenes are known to cause nervous system damage and may harm developing fetuses. Xylenes are clear liquids with generally a very sweet odor and it most likely

						entered your drinking water by **contamination from industrial discharge**.
Atrazine	12/13/2021 6/15/2021	<.0005	<.0005	.001	.00015	Atrazine is a surface water and groundwater contaminant that can enter waterways in **agricultural runoff from row crops**.
Simazine	12/13/2021 6/15/2021	<.001	<.001	.004	.004	Runoff from herbicidal uses
Bromodichloromethane	6/15/2021 12/13/2021	ND	ND	NA	.00006	Bromoform is the major organohalide produced by **chlorination of seawater** during desalination. It is a major component of the organohalides produced by marine algae. The major route of human exposure to bromoform is from drinking-water, although ambient air is also an important source of exposure in some areas.
Bromoform	6/15/2021 12/13/2021	ND	ND	NA	.0005	Bromoform is the major organohalide produced by **chlorination of seawater** during desalination. It is a major component of the organohalides produced by marine algae. The major route of human exposure to bromoform is from drinking-water, although ambient air is also an

						important source of exposure in some areas.
Dibromochloromethane	6/15/2021 12/13/2021	ND	ND	NA	.0001	In the environment, dibromochloromethane is not found as a pure liquid, but instead, it is found either dissolved in water or evaporated into air as a gas. You are most likely to be exposed to dibromochloromethane by **drinking water that has been treated with chlorine**.
Chloroform	6/15/2021 12/13/2021	ND	ND	NA	.0004	The main source of chloroform found in municipal drinking water is the **chlorination of naturally occurring humic materials found in raw-water supplies** (
1,2-Dichloroethane	6/15/2021 12/13/2021	ND	ND	.005	.004	Release in surface water
1,2-Dichlorobenzene	6/15/2021 12/13/2021	ND	ND	.6	.6	Leaching
1,4-Dichlorobenzene	6/15/2021 12/13/2021	ND	ND	.005	.006	Leaching
Trans-1,3-Dichloropropene	6/15/2021 12/13/2021	ND	ND			Chlorination of water
Cis-1,3-Dichloropropene	6/15/2021 12/13/2021	ND	ND			Chlorination of water
o-xylene	6/15/2021 12/13/2021	ND	ND	1.750	1.8	Xylenes are known to cause nervous system damage and may harm developing fetuses. Xylenes are clear liquids with generally a very sweet odor and it most likely entered your drinking water by **contamination**

						from industrial discharge.
1,1,2-Trichlor0-1,2,2-Trifluoroet	6/15/2021 12/13/2021	ND	ND	1.2	4	Naturally occurs
Total Trihalomethanes	6/15/2021 12/13/2021	ND	ND	.08	NA	When water is disinfected with chlorine
M,P-xylene	6/15/2021 12/13/2021	ND	ND	1.75	1.8	Xylenes are known to cause nervous system damage and may harm developing fetuses. Xylenes are clear liquids with generally a very sweet odor and it most likely entered your drinking water by **contaminati on from industrial discharge**.
Dibromo chloropropane	12/13/2021	ND	ND	NA	.0001	According to the EPA, it's used to treat soil for “cucumbers, summer squash, cabbage, cauliflower, carrots, snap beans, okra, aster, shasta daisy, lawn grasses and ornamental shrubs” and it arrives in drinking water as runoff from “soybeans, cotton, pineapples and orchards.”
Alachlor	12/13/2021	ND	ND	.002	.004	Alachlor can be found in runoff from agricultural areas. For

						consumers, the common routes of exposure are through the **consumption of contaminated food and water**.
Atrazine	12/13/2021	ND	ND	.001	.00015	Atrazine is a surface water and groundwater contaminant that can enter waterways in **agricultural runoff from row crops**.
Benzo	12/13/2021	ND	ND	.0002	.000007	The main source of BaP in drinking water is usually **coal tar linings** used in the distribution system rather than the source water
Diethylhexylphthalate	12/13/2021	ND	ND	.003	.004	The primary source of DEHP in drinking water is through **discharge from rubber and chemical factories**. di
Di(2ethylhexyl) adipate	12/13/2021	ND	ND	.4	.2	**Di(2-ethylhexyl) adipate** is used in PVC plastic, plastic wrap and other consumer products. It is released as a pollutant from industrial **sources**
Molinate	12/13/2021	ND	ND	.02	.001	Herbicide runoff
Simazine	12/13/2021	ND	ND	.004	.004	surface water and groundwater contaminant that can enter waterways in **agricultural runoff from row crops**.
Thiobencarb	12/13/2021	ND	ND	.07	.042	Herbicide runoff

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
Aluminum	12/01/2021	ND	ND	.2	.6	Aluminum can leach from **rock and soil** to enter any water source. It can be found as aluminum hydroxide, which is a residual from the municipal feeding of aluminum sulfate. It can also be present as sodium aluminate from a process known as clarification or precipitation softening.
Chloride	5/11/2021	20	17 to 20	500	N/A	The presence of chloride in groundwater can result from a number of sources including the weathering of soils, salt-bearing geological formations, deposition of salt spray, salt used for road de-icing, contributions from wastewaters and in coastal areas, intrusion of salty ocean water into fresh groundwater sources.
Copper	5/11/2021	.005	.005 to .007	1	.3	The major source of copper in drinking water is **corrosion of household plumbing, faucets, and water fixtures**. Water absorbs copper as it leaches from plumbing materials such as pipes, fittings, and brass faucets.
Foaming Agents	5/11/2021	.1	ND to .1	.5	N/A	Foaming is usually caused by **detergents and similar substances** when water has been agitated or aerated as in many faucets.
Manganese	5/11/2021	44	20.06 to 44	50	N/A	The principal source of exposure to

						manganese is from food, but in situations where manganese levels in drinking water are elevated, the contribution from drinking water can increase the overall intake of manganese. Manganese is found naturally in **groundwater and surface waters in Iowa**.
Iron	5/11/2021	.7	<.1 to .7	.3	N/A	Making up at least 5 percent of the earth's crust, iron is one of the earth's most plentiful resources. **Rainwater as it infiltrates the soil and underlying geologic formations dissolves iron, causing it to seep into aquifers that serve as sources of groundwater for wells**.
Silver	5/11/2021	<.0002	<.0002	.1	N/A	Released into water in its ionic or nanoparticle form
TDS	5/11/2021	205	205 to 241	1000	N/A	Natural sources of TDS include **springs, lakes, rivers, plants, and soil**. For example, when water flows underground in a natural spring, it absorbs minerals, such as calcium, magnesium, and potassium, from rocks.
Odor	5/11/2021	ND	ND to 2	3	N/A	Algae and bacteria
Color	5/11/2021	ND	ND to 6	15	N/A	Presence minerals
Zinc	5/11/2021	.191	.003 to .191	5	N/A	Zinc coated pipes
pH	5/11/2021	6.730	6.730 to 7.290	6.5 to 8.5	N/A	Occurs naturally
Sulfate	5/11/2021	34.60	34.60 to 48.60	500	N/A	Point sources include **sewage treatment plants and industrial discharges such as tanneries, pulp mills, and textile mills**.

						Runoff from fertilized agricultural lands also contributes sulfates to water bodies.
Turbidity	5/11/2021	8.30	.1 to 8.30	5	N/A	**Soil erosion**. Waste discharge. Urban runoff.
Magnesium	12/13/2021	23	20.6 to 23	N/A	N/A	Magnesium is present in **seawater** in amounts of about 1300 ppm. After sodium, it is the most commonly found cation in oceans. Rivers contains approximately 4 ppm of magnesium, marine algae 6000-20,000 ppm, and oysters 1200 ppm.
Alkalinity,Bicaronate	5/11/2021	218	212 to 218	N/A	N/A	the main sources for natural alkalinity are **rocks which contain carbonate, bicarbonate, and hydroxide compounds**. Borates, silicates, and phosphates also may contribute to alkalinity.
Calcium	12/13/2021	63.40	55.10 to 63.40	N/A	N/A	Calcium and magnesium enter the water mainly by leaching of rocks. Most calcium in surface waters come from **streams flowing over limestone, dolomite, gypsum, and other calcium-containing rocks and minerals**.
Alkalinity, Carbonate	5/11/2021	<5	ND to <5	N/A	N/A	Naturally occurs
Hydroxide as Calcium Carbonate	5/11/2021	<5	ND to <5	N/A	N/A	calcium hydroxide, also called slaked lime, $Ca(OH)_2$, is obtained **by the action of water on calcium oxide**. When mixed with water, a small proportion of it dissolves, forming a solution known as limewater, the rest remaining as a

						suspension called milk of lime.
Conductivity @25 Umhos/cm	12/13/2021	446	446 to 437	1600	N/A	Dissolved salts and inorganic materials

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects
None					

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
Iron	Over MCL, all groundwater sources are naturally high	ongoing	Quarterly Sampling must be conducted for a minimum one full year	None