

2021 Consumer Confidence Report

Water System Information

Water System Name: CSA #8-Palo Cedro

Report Date: 06/15/2022

Type of Water Source(s) in Use: Ground Water Well

Name and General Location of Source(s): The well is located at the end of Golftime Drive in Palo Cedro Golf Estates subdivision.

Drinking Water Source Assessment Information: The groundwater source is quite safe. There is only one commercial property in the service area. It is a golf course. The rest of the developed parcels in the service area are residential served by a sewer system.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: Shasta County Board of Supervisors-Tuesdays at 9:00 am, Board Chambers, 1450 Court Street, Redding, CA 96001

For More Information, Contact: Scott Sealander and 530-225-5571

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.

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 CSA #8 – Palo Cedro a 1855 Placer Street, Redding, CA 96001, 530-225-5571 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 CSA #8 - Palo Cedro 以获得中文的帮助: 1855 Placer Street, Redding, CA 96001, 530-225-5571.

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa CSA #8 – Palo Cedro 1855 Placer Street, Redding, CA 96001 o tumawag sa 530-225-5571 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 CSA #8 – Palo Cedro tại 1855 Placer Street, Redding, CA 96001, 530-225-5571 để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsaab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau CSA #8 – Palo Cedro ntawm 1855 Placer Street, Redding, CA 96001, 530-225-5571 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 <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).
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
<i>E. coli</i>	(2021) 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 <i>E. coli</i>	(2021) 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

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)	6/9/21 To 6/10/21	5	ND	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	6/9/21 To 6/10/21	5	.630	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)	3/23/21	15.6	N/A	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	3/23/21	153	N/A	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
Total Trihalomethanes (TTHMs) (ug/L)	5/31/19 To 6/25/19	ND	ND To ND	80	N/A	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ug/L)	5/31/19 To 6/25/19	ND	ND To ND	60	N/A	By-product of drinking water disinfection
Nitrate (mg/L)	5/17/21 To 6/7/21	1.83	1.77 To 1.83	10	10Ni	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Nitrite (mg/L)	12/14/21	N/D	N/A	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Chlorine (mg/L) as Cl ₂ (mg/L)	Jan-Dec 2021	Measured daily. See Range	.29 To .61	4.0	4	Drinking water disinfectant added for treatment.
Combined Radium (pCi/L)	3/7/16	1.15	N/A	5	0.019	Erosion of natural deposits.

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
Sulfate (SO ₄) (mg/L)	3/23/21	7.93	N/A	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (uS/cm)	3/23/21	360	N/A	1600	N/A	Substances that form ions when in water; seawater influence
Total Dissolved Solids (TDS) (mg/L)	3/23/21	253	N/A	1000	N/A	Runoff/leaching from natural deposits
Chloride (Cl) (mg/L)	3/23/21	19.8	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects
Hexavalent Chromium Cr (VI) (ug/L)	9/25/14	2.3	N/A	50	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer
Nitrate asN03 (mg/L)	5-17-21 To 12/14/21	1.83	ND To 1.83	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.

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).

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. CSA #8 - Palo Cedro Water 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>.

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
NONE	N/A	N/A	N/A	N/A

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>	N/A	N/A	0	(0)	Human and animal fecal waste
Enterococci	N/A	N/A	TT	N/A	Human and animal fecal waste
Coliphage	N/A	N/A	TT	N/A	Human and animal fecal waste

Table 9. Violation of Groundwater TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
NONE	N/A	N/A	N/A	N/A

For Systems Providing Surface Water as a Source of Drinking Water

Table 10. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique ^(a) (Type of approved filtration technology used)	N/A Groundwater source only.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	N/A
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	N/A
Highest single turbidity measurement during the year	N/A
Number of violations of any surface water treatment requirements	N/A

(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	N/A	N/A	N/A	N/A

BELLA VISTA WATER DISTRICT

2021 CONSUMER CONFIDENCE REPORT

The District is pleased to present the 2021 Consumer Confidence Report. Our unvarying goal is to provide a safe and dependable supply of drinking water to all of our customers. Last year, as in years past, your tap water met all EPA and State drinking water health standards. Once again we are proud to report that our water system has never violated a maximum contaminant level or any other water quality standard.

(Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Bella Vista Water District at 11368 East Stillwater Way Redding , California. 530-241-1085 para asistirlo en español.)

WHERE OUR WATER COMES FROM

In 2021 our water sources included surface water from the Sacramento River, groundwater from our five wells, and intertie with the City of Redding. For the 2021 water year which included the months of March 2021 through February 2022, the District received a constrained Water Supply Allocation from the Central Valley Project. This allocation was 25% of historical use for municipal and industrial use and 0% for agricultural use driven by below-average precipitation and below-average water storage. With the reduced supply, the District implemented Stage 3 of its Water Shortage Contingency Plan restricting customers to 80% of their historic use with penalties for any use above that amount.

In 2021, surface water from the Sacramento River made up 69.5% of the treated water supply of approximately 2.01 billion gallons (6,155 acre-feet) compared with 91.5% of the treated water supply and 3.51 billion gallons (10,167 acre-feet) in 2020. The maximum daily flow through the Water Treatment Plant in 2021 was 11.88 million gallons (36.45 acre-feet) on September 23rd. In 2021 the District captured and recycled approximately 125.3 million gallons (384.6 acre-feet) of filter backwash water, supplying approximately 6.2% of the treated water supply. This recycled water reduces the amount of water that the District diverts from the Sacramento River or pumps from groundwater wells and provides a much-needed reliable source of water during shortages.

The District's wells draw from the Redding Groundwater Basin, Enterprise Subbasin. Collectively, the wells made up 28.9% of the total supply, or approximately 833.5 million gallons (2,558 acre-feet) in 2021 compared with 3.7% of the treated water supply and 143.4 million gallons (440 acre-feet) in 2020. The treatment process at each of the five wells consists of oxidation of iron and manganese using chlorine, followed by adsorption of the iron and manganese oxides in pressure filters. Chlorine residual is carried through the entire process to aid in maintaining a chlorine residual in the distribution system. No iron or manganese was detected in any of the treated well water samples collected in 2021. Well water is warmer than the treated surface water and has a different taste due to its higher mineral content. At times, the mixing of chlorinated well water with treated river water in the distribution system generates a more noticeable taste due to the different physical and chemical properties of the different waters. To ensure the safety of the water the same microbiological testing is completed weekly at various sites throughout the water distribution system, regardless of the water source.

The District received 46.5 million gallons (143 acre-feet) of water through its interties with the Cities of Redding and Shasta Lake during all of 2021.

Source water assessments were performed by the State Water Resources Control Board (State Board), Division of Drinking Water between January 2002 and April 2003. The District's Sacramento River source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: (1) metal plating/finishing/ fabricating, (2) wood/pulp/paper processing and mills, and (3) drinking water treatment plants. The source is considered most vulnerable to the following activities not associated with any detected contaminants: (1) concentrated aquatic animal production facilities, (2) historic waste dumps/landfills, (3) landfills/dumps, (4) historic mining operations, and (5) wastewater treatment plants and disposal facilities (above Shasta Dam). The District's well sources are considered most vulnerable to the following activities not associated with any detected contaminants: (1) lumber processing and manufacturing; (2) septic systems - low density; (3) sewer collection systems; (4) historic waste dumps/landfills; (5) automobile - gas stations; and (6) utility stations - maintenance areas.

A copy of the complete assessment may be viewed at Bella Vista Water District, 11368 E. Stillwater Way, Redding, CA 96003. You may request a summary of the assessment be sent to you by contacting our office at info@bvwd.org or (530) 241-1085, ext. 105.

In 1989 the Federal Surface Water Treatment Rule set forth specific regulations requiring proper treatment of surface waters, as well as specific license requirements for water treatment operators. Although the regulations have changed dramatically, the overall process has not. Currently, the District's staff includes 11 individuals with state certification as water treatment operators and 16 with certification as water distribution operators (including 11 individuals with certification as both) who contribute to the operation and maintenance of the District's facilities 365 days per year.

CONTAMINANTS IN 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 human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, 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 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 are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.

- Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

STATE AND FEDERAL REGULATIONS

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (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. 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. Additional information on bottled water is available on the California Department of Public Health website (<https://www.cdph.ca.gov/programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx>).

The tables in this report list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of our water quality, are more than one year old.

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 at 1-800-426-4791.

A NOTE TO THE IMMUNO-COMPROMISED FROM THE UNITED STATES EPA

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/Center 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).

REGARDING LEAD IN DRINKING WATER

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. Bella Vista Water District 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 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 or at <http://www.epa.gov/lead>.

ARSENIC IN THE DISTRICT'S WATER

Analysis of the District's surface and well waters has shown that it contains low levels of arsenic (less than 10 parts per billion). The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

ABOUT THE WATER QUALITY TABLES

Bella Vista Water District routinely monitors for constituents in your drinking water according to federal and state laws. The tables in this report show the results of our monitoring for the period through December 31, 2021. Where contaminants are monitored less than once per year, the values included in the report tables represent the results of the most recent analyses. In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, the following definitions are provided:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not detectable at current testing limits.

Parts per million (ppm) or Milligrams per liter (mg/L) - one part per million corresponds to one minute in 1.9 years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter ($\mu\text{g/L}$) - one part per billion corresponds to one minute in 1,900 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Microsiemens per centimeter ($\mu\text{S/cm}$) is a unit for reporting the specific electrical conductance of the water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. 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. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

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.

Public Health Goal (PHG) B 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.

Primary Drinking Water Standards (PDWS) - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Regulatory Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

2021 RESULTS OF WATER QUALITY ANALYSES

Results of Sampling for Microbial Contamination					
Contaminant	MCL	Unit of Measurement	PHG (MCLG)	Highest Number of Detections	
				Treated Surface Water	Treated Well Water
1. Total Coliform Bacteria (Total Coliform Rule)	Presence of coliform bacteria in no more than one sample per month	presence/absence	0	None	None
2. Fecal coliform and <i>E.coli</i> (Total Coliform Rule)	A routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	presence/absence	0	None	None
3. Fecal Indicators (<i>E.coli</i> , enterococci or coliphage) (Total Coliform Rule)	Treatment Technique	n/a	n/a	None	None

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2021. These revisions add the requirements of the federal Revised Total Coliform Rule, effective since April 1, 2016, to the existing state Total Coliform Rule. The revised rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and *E. coli* bacteria). The U.S. EPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. The state Revised Total Coliform Rule became effective July 1, 2021. Note: BVWD analyzes a minimum of 5 water samples per week throughout the year in the water distribution system for coliform bacteria. A total of 260 coliform bacteria monitoring samples were taken during calendar year 2021.

2021 RESULTS OF WATER QUALITY ANALYSES (continued)

Sampling Results Showing Treatment of Surface Water Source (Sacramento River)					
Contaminant	Performance Standard / MCL (Treatment Technique)	Unit of Measurement	Level Found	Range	Violations
4. Turbidity	(1) Shall at no time exceed 1 NTU	Based on measurements made at 4 hour intervals while the plant is in operation	Less than 1.0 NTU at all times	0.020 NTU to 0.51 NTU	None
	(2) Less than 0.1 NTU in 95% of the measurements taken each month	Lowest Monthly % of measurements meeting the standard	99	99 - 100	None
	(3) Reduction in turbidity of 80% or more	Average monthly percentage reduction in turbidity	98.65	98.4 - 99.7	None

Note: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Sampling Results Showing the Detection of Contaminants with a Primary Drinking Water Standard							
Contaminant	MCL	PHG (MCLG)	Unit of Measurement	Sacramento River*		Well Water**	
				Average Value	Range	Average Value	Range
5. Gross Alpha	15	(0)	pCi/L	2.9	-	ND	ND
6. Radium 228	5	(0)	pCi/L	1.82	-	0.95	0.2 – 1.6
7. Aluminum	1000	0.6	ppb	ND	-	ND	All ND
8. Arsenic	10	0.004	ppb	ND	-	4.07	2 – 8
9. Barium	1000	2	ppb	13.3	-	155	ND - 297
10. Chromium, Total	50	(100)	ppb	ND	-	ND	All ND
11. Chromium, VI	***	0.02	ppb	ND	-	ND	ND
12. Fluoride	2.0	1	ppm	ND	-	0.13	ND - 0.14
Sacramento River and Well Water							
				2021 Highest Locational Running Annual Average		Range for Samples taken in 2021	
13. TTHM [Total trihalomethanes]****	80	N/A	ppb	28.4		0.0 – 50.5	
14. HAA5- [5 Haloacetic acids]****	60	N/A	ppb	24.1		0.0 – 31.0	

Note: TTHM and HAA5 results are from samples collected from the Distribution System which may include water from both the river and wells.

* All results from the surface water source (which represents 69.5% of the water produced by the District in 2021) are from samples collected in 2021, except for Gross Alpha which is from 2019, and Radium 228 is from 2015.

**Well water results reflect the latest results taken from each well; the results include samples collected over the period 2012 through 2021. The dates of the latest samples may be obtained by contacting the District's office.

*** There is currently no MCL for Chromium VI. The previous MCL of 10ppb was withdrawn on September 11, 2017.

**** The "Running Annual Average" includes samples collected in 2020 and 2021, while the Range includes the results of analysis of samples collected in 2021 only.

2021 RESULTS OF WATER QUALITY ANALYSES (continued)

Sampling Results Showing the Detection of Contaminants with a Secondary Drinking Water Standard (Aesthetic standards, established by the State Board - Division of Drinking Water)							
Contaminant or Analyte	MCL	PHG (MCLG)	Unit of Measure- ment	Sacramento River*		Well Water**	
				Average Level Detected	Range	Average Level Detected	Range
15. Foaming Agents (MBAS)	500	N/A	µg/L	ND	-	ND	ALL ND
16. Total dissolved solids	1,000	N/A	mg/L	88	-	203	149 - 243
17. Specific conductance	1,600	N/A	µS/cm	139	-	295	257-360
18. Chloride	500	N/A	mg/L	3.48	-	18.7	11 - 70
19. Sulfate	500	N/A	mg/L	3.42	-	.52	0.52 – 4.9

Sampling Results for Unregulated Contaminants*** (Unregulated contaminant monitoring helps the USEPA and the State Board to determine where certain contaminants occur and whether the contaminants need to be regulated.)							
Contaminant or Analyte	MCL	PHG (MCLG)	Unit of Measure- ment	Sacramento River*		Well Water**	
				Average Level Detected	Range	Average Level Detected	Range
20. Vanadium	Notification Level = 50 ppb	N/A	ppb	4.72		0.4	ND – 0.74

Sampling Results for Sodium, Hardness and pH							
Contaminant or Analyte	MCL	PHG (MCLG)	Unit of Measurement	Sacramento River*		Well Water**	
				Average Level Detected	Range	Average Level Detected	Range
21. Sodium	N/A	N/A	ppm	7.9	-	43	25 - 66
22. Hardness	N/A	N/A	ppm	51	-	71	45 - 87
23. pH	6.5 - 8.5	N/A	pH units	7.58	-	7.95	7.8 – 8.1

* All results from the surface water source (which represents 69.5% of the water produced by the District in 2021) are from samples collected in 2021.

**Well water results reflect the latest results taken from each well; the results include samples collected over the period 2010 through 2021. The dates of the latest samples may be obtained by contacting the District's office.

***In 2013 and 2014 the District sampled for a number of additional unregulated contaminants in the water. The results of these samples were either non-detectable or below notification levels. Additional information regarding unregulated contaminants is available by contacting the District's office.

2021 RESULTS OF WATER QUALITY ANALYSES (continued)

Sampling Results Showing the Detection of Lead and Copper						
Contaminant	PHG (MCLG)	Action Level (AL)	90 th percentile level detected	No. of samples collected	No. of Sites exceeding Action Level	Typical Source of Contaminant
Lead (ppb)	0.2	15	ND	30	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	0.3	1.3	0.250	30	0	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives

Note: The District is required to conduct lead and copper sampling every three years. These results are from the most recent round of sampling from July 2019. The next round of sampling is scheduled for July of 2022. No schools requested lead sampling in 2021.

Disinfectant Residuals found in the Distribution System during 2021						
Contaminant	MCL [MRDL]	PHG (MRDLG)	Average Value	Range	Major Sources in Drinking Water	Health Effects
Chlorine (ppm)	4.0 (as Cl ₂)	4	0.76	0.10 to 1.71	Drinking water disinfectant added for treatment	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

MRDL = Maximum Residual Disinfectant Level (The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.)

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.

TYPICAL SOURCES OF DETECTED CONTAMINANTS

Contaminant	Typical Source of Contaminant
1. Total Coliform Bacteria	Naturally present in the environment
2. Fecal Coliform and <i>E. coli</i>	Human and animal fecal waste
3. Fecal	Human and animal fecal waste
4. Turbidity	Soil runoff
5. Gross Alpha	Erosion of natural deposits
6. Radium 228	Erosion of natural deposits
7. Aluminum	Erosion of natural deposits; residue from some surface water treatment
8. Arsenic	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
9. Barium	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
10. Chromium	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
11. Fluoride	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
12. TTHM [Total trihalomethanes]	By-products of drinking water chlorination
13. Haloacetic Acids	By-products of drinking water chlorination
14. Foaming Agents (MBAS)	Municipal and industrial waste discharges
15. Total dissolved solids	Runoff/ leaching from natural deposits
16. Specific conductance	Substances that form ions when in water; seawater influence
17. Chloride	Runoff/leaching from natural deposits; seawater influence
18. Sulfate	Runoff/leaching from natural deposits; seawater influence
19. Vanadium	Natural sources and from the burning of fuel oils
20. Hexavalent Chromium	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits

OTHER TEST RESULTS OF INTEREST

Constituent	Description and Source Information
21. Sodium	Refers to the salt present in the water and is generally naturally-occurring
22. Hardness	Is the sum of polyvalent cations present in the water, generally magnesium and calcium. These cations are generally naturally-occurring.
23. pH	The pH of a water is a measure of its hydrogen ion activity or acidity. By definition the pH of pure water is 7.0. The pH range of most natural waters is about 6.0 to 8.5.

YOUR VIEWS ARE WELCOME

If you have any questions about this report, please contact Tom Zaharris, District Treatment Superintendent, at (530) 241-1085, ext. 201. We want our valued customers to be informed about their water district. If you want to learn more, please visit the District's web site: www.bvwd.org or attend any of our regularly scheduled Board of Directors meetings. The meetings are typically held on the fourth Monday of each month at 5:30 p.m. at the District office, located at 11368 E. Stillwater Way, Redding, CA 96003. Agendas are posted on the District's website.

Bella Vista Water District is an equal opportunity employer and provider.