2023 Consumer Confidence Report

Water System Information

Water System Name: **Bolinas Community Public Utility District**

Report Date: June 12, 2024

Type of Water Source(s) in Use: Surface Water and stored water.

Name and General Location of Source(s): Arroyo Hondo Creek, Point Reyes National Seashore, California, and Woodrat Reservoirs 1 & 2, Bolinas, California.

Drinking Water Source Assessment Information: A source water assessment for the BCPUD water system was prepared by the State Water Resources Control Board ("SWRCB") in May 2003. No contaminants were detected in the BCPUD water sources; however, the sources are still considered vulnerable to activities not associated with any contaminants: surface water – streams/lakes/rivers. A copy of the complete assessment is available from the SWRCB, Division of Drinking Water, 50 D Street, Suite 200, Santa Rosa, California 95404.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: Third Wednesday of every month at 7:30 p.m., 270 Elm Road, Bolinas, California 94924.

For More Information, Contact: Georgia Woods, General Manager (415) 868-1224

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, 2023 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Bolinas Community Public Utility District a 270 Elm Road, Bolinas, California 94924, (415) 868-1224 para asistirlo en español.

Terms Used in This Report

Term	Definition
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.

Term	Definition
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 (SWRCB) 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 SWRCB 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 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 SWRCB 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. If applicable, additional information regarding a violation is provided later in this report.

Table 1. Sampling Results Showing the Detection of Coliform Bacteria

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
E. coli	0	0	(a)	0	Human and animal fecal waste
Total Coliform	0	0			

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Table 2. Sampling Results Showing the Detection of Lead and Copper

Lead and Copper	Sample Date	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	8/30/22	10	<5	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	8/30/22	10	0.17	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 3. Sampling Results for Sodium and Hardness

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	12/5/23	Avg = 29	**26**-33	None	None	Salt present in the water and is generally naturally occurring.
Hardness (ppm)	12/5/23	Avg = 121	53-**170**	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring.

Note: the results reported in Table 3 pertain to samples taken from the BCPUD's raw source water (i.e., the **Arroyo Hondo Creek** and Woodrat 1 Reservoir), before it is treated at the water treatment plant and sent into the distribution system. Sample results for the BCPUD's treated water were 28 ppm for sodium and 140 ppm for Hardness.

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
Fluoride (ppm) Fluoride (ppm) (raw source water)	12/5/23 12/5/23	0.18 Avg = 0.15	N/A 0.1 – **0.2**	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharges from fertilizer and aluminum factories.
Nitrate as N (ppm) Nitrate as N (ppm) (raw source water)	12/5/23 12/5/23	0.65 Avg = 0.33	N/A ND – **0.66**	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Arsenic (ppb) Arsenic (ppb) (raw source water)	12/5/23 12/5/23	2.8 Avg = 1.4	N/A **ND** – 2.8	10	0.004	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes.
Total Trihalomethanes (TTHMs) (ppb)	3/7/23 6/1/23 9/5/23 12/6/23	Avg = 35.67	28.99–35.67	80	N/A	Byproduct of drinking water disinfection.
Haleoacetic Acids (HAA5s) (ppb)	3/7/23 6/1/23 9/5/23 12/6/23	Avg = 16.33	10.68–16.33	60	N/A	Byproduct of drinking water disinfection.
Chlorine (ppm)	Biweekly throughout 2023	Avg = 0.55	0.31-0.92	[4.0]	[4.0]	Drinking water disinfectant added for treatment.

Note: the results reported in Table 4 pertain to samples taken from the treated water in the BCPUD's distribution system unless otherwise indicated; the chlorine residual results reported are based on samples taken at the BCPUD maintenance yard. The results reported in Table 4 for Fluoride, Nitrate as N and Arsenic also include samples taken from the BCPUD's raw source water (i.e., the **Arroyo Hondo Creek** and Woodrat 1 Reservoir), before it is treated at the water treatment plant and sent into the distribution system.

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SDWS	PHG (MCLG)	Typical Source of Contaminant
Sulfate (ppm)	12/5/23	Avg = 28	11 - **45**	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Chloride (ppm)	12/5/23	Avg = 33.5	**26** - 41	500	N/A	Runoff/leaching from natural deposits; seawater influence

Specific Conductance (micromhos)	12/5/23	Avg = 315	250 - **380**	1600	N/A	Substances that form ions when in water; seawater influence.
Total Dissolved Solids (ppm)	12/5/23	Avg = 175	130 - **220**	1000	N/A	Runoff/leaching from natural deposits.
Turbidity (Units)	12/5/23	Avg = 1.025	**0.35** – 1.7	5	N/A	Soil runoff.
Color (units)	12/5/23	Avg = 30*	**10** – 50*	15	N/A	Naturally occurring organic materials.
Odor – Threshold Odor Number (TON)	12/5/23	Avg = 6	**ND** – 12*	3	N/A	Naturally occurring organic materials.
Aluminum (ppb)	12/5/23	Avg = 34	**ND** - 68	200	N/A	Erosion of natural deposits' residual from some surface water treatment processes.
Manganese (ppb)	12/5/23	Avg = 11.5	**ND** - 23	50	N/A	Leaching from natural deposits.
Zinc (ppm)	12/5/23	Avg = 149	**68** - 230	5	N/A	Runoff/leaching from natural deposits; industrial wastes.

Note: the results reported in Table 5 are from the BCPUD's raw source water (i.e., **the Arroyo Hondo Creek** and Woodrat 1 Reservoir, before it is treated at the water treatment plant and sent into the distribution system). Secondary Drinking Water Standards (SDWS) are based on aesthetic factors (taste, appearance, odor, etc.) and are not health-related; these standards are in place to establish an acceptable aesthetic quality of the water. Results for Color (50 units) and Odor (12 TON) (asterisked above) from our Woodrat 1 Reservoir source were above the SDWS. (See also Table 7).

Table 6. Detection of Unregulated Contaminants

The BCPUD water system was randomly selected by the U.S. EPA to participate in the 2023 round of monitoring under the Unregulated Contaminants Monitoring Rule (UCMR 5). UCMR 5 requires certain water systems to collect drinking water samples for **lithium** and **29 per- and polyfluoroalkyl substances (PFAS)** analysis (using analytical methods developed by the EPA and consensus organizations) during a 12-month period between 2023 and 2025. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. The BCPUD collected the required drinking water samples on March 22, June 20, September 12 and December 6, 2023. (On November 1, 2023, the BCPUD was asked by the U.S. EPA to resample for some of the required PFAS due to quality control issues at the receiving lab pertaining to the September 12 samples; BCPUD therefore resampled for that subset of PFAS on November 8, 2023.)

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MRL	Additional Information
Lithium (ppb)	3/22/23 6/20/23 9/12/23 12/6/23	ND (see Note below) Avg. = 12.1	10.2 – 13.6	9	Naturally occurring metal that may concentrate in brine waters; lithium salts are used as pharmaceuticals, used in electrochemical cells, batteries and in organic synthesis.

29 Per- and Polyfluoroalkyl substances (PFAS) (The specific PFAS sampled and analyzed, as well as their corresponding Minimum Reporting Levels (MRLs), are listed on the final page of this report.)	3/22/23 6/20/23 9/12/23 11/8/23 12/6/23	**Results for all 29 PFAS sampled and analyzed by the U.S. EPA were below the applicable MRLs.**	N/A	See Note below	PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications including: non-stick cookware, water-repellant clothing, stain-resistant fabrics and carpets, cosmetics, firefighting foams, electroplating, and products that resist grease, water, and oil. PFAS are found in the blood of people and animals and in water, air, fish, and soil at locations across the United States and the world.

Note: the **Lithium** results for samples taken on March 22, 2023 were below the MRL (which is 9 ppb); as such, the "Level Detected" and "Range of Detections" reported in the columns above pertain only to the samples taken on June 20, September 12 and December 6, 2023.) The MRLs for each of the specific 29 PFAS analyzed range from 0.02 ppb to 0.008 ppb (see the final page of this report for additional detail). Copies of these PFAS and lithium sample results are available at the BCPUD office (270 Elm Road, Bolinas, California 94924).

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. The Bolinas Community Public Utility 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 (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

(See next page)

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
Secondary Drinking Water Standard – **Color** See Note below	The sample results for color from the Woodrat 1 Reservoir (50 units) was above the MCL (15 units).	Ongoing.	The BCPUD has investigated potential methods to improve the aesthetic quality of water in this reservoir and will continue to do so until a solution is identified.	There is no mandatory health effects language for the violation of a secondary MCL; the secondary standards are in place to establish an acceptable aesthetic quality of water.
Secondary Drinking Water Standard – **Odor** See Note below	The sample results for odor from the Woodrat 1 Reservoir (12 TON) was above the MCL (3 TON)	Ongoing.	The BCPUD has investigated potential methods to improve the aesthetic quality of water in this reservoir and will continue to do so until a solution is identified.	There is no mandatory health effects language for the violation of a secondary MCL; the secondary standards are in place to establish an acceptable aesthetic quality of water.

Note: sample results for Color (5 units) and for Odor (<1 TON) from the treated water in the BCPUD's distribution system were well under the applicable SDWS.

For Systems Providing Surface Water as a Source of Drinking Water

Table 8. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique [a] (Type of approved filtration technology used)	Pre-filter screen, aluminum chlorohydrate (ACH) coagulation feed system and microfiltration.
Turbidity Performance Standards [b] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 1 NTU in 95% of measurements in a month. 2 – Not exceed 1 NTU for more than eight consecutive hours. 3 – Not exceed 1 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	0.07 NTU
Number of violations of any surface water treatment requirements	0

(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.

Pursuant to UCMR 5 and as directed by the U.S. EPA, in 2023 the BCPUD monitored for the 29 per- and polyfluoroalkyl substances (PFAS) listed in the following table (along with the corresponding Minimum Reporting Levels (MRLs)):

Contaminant	MRL (ppb)
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.005
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	0.005
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	0.003
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	0.005
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	0.003
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.002
hexafluoropropylene oxide dimer acid (HFPO-DA)(GenX)	0.005
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.02
perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.003
perfluoro-3-methoxypropanoic acid (PFMPA)	0.004
perfluoro-4-methoxybutanoic acid (PFMBA)	0.003
perfluorobutanesulfonic acid (PFBS)	0.003
perfluorobutanoic acid (PFBA)	0.005
perfluorodecanoic acid (PFDA)	0.003
perfluorododecanoic acid (PFDoA)	0.003
perfluoroheptanesulfonic acid (PFHpS)	0.003
perfluoroheptanoic acid (PFHpA)	0.003
perfluorohexanesulfonic acid (PFHxS)	0.003
perfluorohexanoic acid (PFHxA)	0.003
perfluorononanoic acid (PFNA)	0.004
perfluorooctanesulfonic acid (PFOS)	0.004
perfluorooctanoic acid (PFOA)	0.004
perfluoropentanesulfonic acid (PFPeS)	0.004
perfluoropentanoic acid (PFPeA)	0.003
perfluoroundecanoic acid (PFUnA)	0.002
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.005
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.006
perfluorotetradecanoic acid (PFTA)	0.008
perfluorotridecanoic acid (PFTrDA)	0.007

As explained earlier in this report, all of the results for the 29 PFAS analyzed and reported by the EPA for the BCPUD's water system in 2023 were below the Minimum Reporting Levels.