Consumer Confidence Water Quality Report 2024

City of Big Bear Lake Department of Water & Power

Big Bear System

41972 Garstin Drive Big Bear Lake, CA 92315

www.BBLDWP.com

(909)866-5050

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To Our Customers

The City of Big Bear Lake Department of Water & Power (DWP) is proud to present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). By law, each community water system is required to provide this report to its customers each year.

Your CCR Provides Need-To-Know Information such as:

Where your **water comes from (Source).**

A list of **regulated contaminants** detected and the level.

Potential **health effects** from consuming contaminated water and safeguards against water-related illnesses.

Contaminant levels in your area compared to national standards and any violations of health-based standards.

Water System Information

This report is a summary of the quality of water provided to our customers. Throughout the year we conduct hundreds of tests for multiple types of water contaminants. 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 prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide similar protection for public health.

Drinking Water Sources

Sources of drinking water (both tap water and bottled water) can 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. As a result, all 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 (800) 426-4791.

DWP tests drinking water for many contaminants as required by state and federal regulations. This report shows the results of monitoring for the period of January 1 - December 31, 2024.

DWP's Sources

DWP produces all its water from local ground water sources. There are 44 wells, 26 boosters, and 11 reservoirs with a total storage capacity of 8 million gallons in the Big Bear system. 4 portable generators, and 2 portable booster pumps are available for deployment to maintain this system during emergencies. In 2024 there were 614.73 million gallons of water produced out of the Big Bear system.

DWP's mountaintop water supply is geographically isolated from any state or regional water sources replenished solely from precipitation. Please help protect this strong but limited water supply by conserving water. Contact us... we can assist!

Definitions

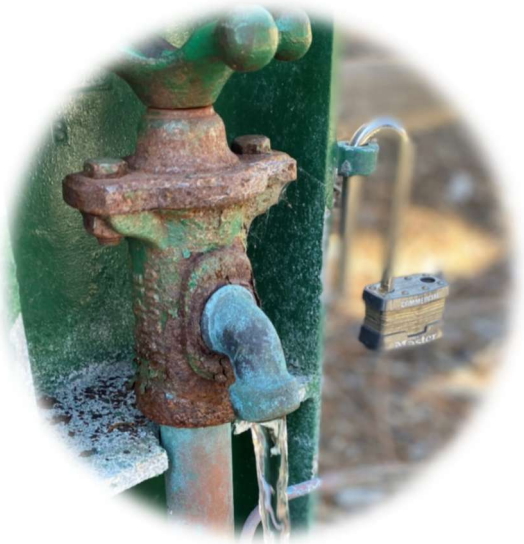
The following terms and abbreviations are used in tables 1-5:

- **Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Contaminant:** Any physical, chemical, biological or radiological substance or matter in water. Drinking water may reasonably be expected to contain at least small amounts of some contaminants. Some contaminants may be harmful if consumed at certain levels in drinking water. The presence of contaminants does not necessarily indicate that the water poses a health risk.
- **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.
- **N/A:** Not applicable
- **ng/L -** Nanograms per Liter or parts per trillion
- **N/S:** No standard
- **ND:** Not detectable at testing limit.
- **Nephelometric Turbidity Units (NTU):** This is a measure of suspended material in water.
- **ppm:** parts of substance per million parts of water or milligrams per liter
- **ppb:** parts of substance per billion parts of water or micrograms per liter
- **ppt –** parts of substance per trillion parts of water or Nanograms per Liter
- **pCi/L:** picocuries per liter (a measure of radiation)
- **Primary Drinking Water Standard (PDWS):** MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.
- **Public Health Goal (PHG):** The level of a contaminant in drinking water, below which, there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

Contaminants

Contaminants that may be present in source water before treatment 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 storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.



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

How To Read The Tables 1-5

- Starting with "Regulated Contaminants" on the far-left column, read across.
- The next column to the right, "Last Sample," is the year the sample was taken for the Regulated Contaminants on the far-left column.
- The same pattern can be followed for the rest of the columns, reading from left to right: "Range" tells the highest and lowest amounts measured.
- "Goal," "MCLG," or "PHG" is the goal level for that substance (this may be lower than what is allowed).
- "State MCL" shows the highest level of substance (contaminant) allowed.
- "Average Detected" represents the measured amount (less is better).
- A "No" in the "Violation" column indicates government requirements have been met.
- "Major Sources" in Drinking Water tells where the substance usually originates.

Water Information Sources

- American Water Works Association: www.awwa.org
- Centers for Disease Control and Prevention: www.cdc.gov
- City of Big Bear Lake Department of Water: www.bbldwp.com
- National Library of Medicine/National Institute of Health: www.nlm.nih.gov/medlineplus/drinkingwater.html
- State Water Resources Control Board, Division of Drinking Water: www.waterboards.ca.gov/drinking_water/programs/
- United States Environmental Protection Agency (USEPA): www.epa.gov

Certain individuals are 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, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk.

These individuals should seek advice about drinking water from their health care providers. USEPA/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 (800) 426-4791.

Water Quality Data For 2024

The following tables list all the drinking water contaminants detected during the most recent sampling. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The state requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data, though representative of the water quality, is more than one year old.

Table 1: Primary Regulated Contaminants

Regulated Contaminants	Last Sample	Range Detected		Goal (PHG or MCLG)	State MCL	Average Detected	Violation	Major Sources
		Low	High					
Microbiological (sampled Weekly)								
Total Coliform Bacteria (# positive)	2024	0	0	0	48/ month	0	No	Naturally present in the environment
Clarity (sampled every 3 years)								
Turbidity (NTU)	2023	ND	4.3	N/A	5	0.72	No	Soil runoff

Inorganic Chemicals (sampled every 3 years, except Nitrates which are every year)								
Aluminum (ppb)	2023	ND	170	600	1000	8.10	No	Erosion of natural deposits
Arsenic (ppb)	2023	ND	4.5	4	10	0.21	No	Erosion of natural deposits
Barium (ppb)	2023	ND	150	2000	1000	13.81	No	Erosion of natural deposits
Fluoride (ppm)	2023	ND	1.8	1	2	0.30	No	Erosion of natural deposits
Nitrate (as NO3-N) (ppm)	2024	ND	2.4	10	10	0.88	No	Fertilizer runoff/leaching; septic/sewage leaching; erosion of natural deposits
Radioactivity (sampled every 9 years)								
Gross Alpha Activity (pCi/L)	2021	ND	4.9	0	15	0.36	No	Erosion of natural deposits
Uranium (pCi/L)	2021	ND	ND	0.43	20	0	No	Erosion of natural deposits
Additional Constituents (sampled every 3 years)								
PH (units)	2023	7.3	8.0	N/S	N/S	7.7	No	N/A
Hardness (CaCO3) (ppm)	2023	75	410	N/S	N/S	256	No	N/A
Calcium (ppm)	2023	20	90	N/S	N/S	61.71	No	N/A
Magnesium (ppm)	2023	5.1	51	N/S	N/S	24.83	No	N/A
Sodium (ppm)	2023	4.5	38	N/S	N/S	15.36	No	N/A
Potassium (ppm)	2023	1.1	4.8	N/S	N/S	2.85	No	N/A
Bicarbonate (ppm)	2023	120	420	N/S	N/S	281	No	N/A
Total Alkalinity (ppm)	2023	110	350	N/S	N/S	232	No	N/A
Disinfectant Byproducts, Disinfectant Residuals, and Disinfectant Byproduct Precursors								
Total Trihalomethanes (ppb)	2024	ND	9.1	N/S	80	4.55	No	Byproduct of Disinfection
Haloacetic Acids (ppb)	2024	ND	ND	N/S	60	0	No	Byproduct of Disinfection

Table 2: Secondary Standards

Regulated Contaminants	Last Sample	Range Detected		Goal (PHG or MCLG)	State MCL	Average Detected	Violation	Major Sources
		Low	High					
Secondary Standards (sampled every 3 years)								
Odor-Threshold (units)	2023	1	1	N/S	3	1	No	Naturally-occurring organic materials
Chloride (ppm)	2023	1.6	48	N/S	500	11.68	No	Runoff/leaching from natural deposits
Sulfate (ppm)	2023	.63	110	N/S	500	25.97	No	Runoff/leaching from natural deposits
Total Dissolved Solids (ppm)	2023	140	470	N/S	1000	307	No	Runoff/leaching from natural deposits
Specific Conductance (E.C.) umhos/cm	2023	210	810	N/S	1600	519	No	Substances that form ions when in water, seawater influence
Iron (ppb)	2023	ND	630	N/S	300	61	No	Leaching from natural deposits
Manganese (ppb)	2023	ND	39	N/S	50	1.86	No	Leaching from natural deposits

Secondary Standards are for contaminants that can affect the taste, odor, or appearance of the drinking water. There are no PHGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics.

Table 3: Lead and Copper

Regulated Contaminants	No. Samples Collected	Goal (PHG or MCLG)	State AL	Detected Level (90th Percentile)	# of Sites Exceeding AL	Major Sources

Lead and Copper (sampled every 3 years, last sampled in 2023)						
*Lead (ppm)	20	0.002	0.015	0.0045	0	Internal corrosion of household water plumbing systems
*Copper (ppm)	20	0.17	1.3	0.22	0	Internal corrosion of household water plumbing systems

* Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. DWP is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact DWP at 909-866-5050. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at https://www.epa.gov/safewater/lead. DWP has conducted a lead service line study and the final lead service line inventory is available at www.bbldwp.com/leadandcopper/bigbear.

*Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper that exceeds the action level over many years may suffer liver or kidney damage. People with Wilsons Disease should contact their personal doctor.

Lead in Schools

DWP conducted lead sampling at four schools, including Baldwin Lane Elementary School, North Shore Elementary School, Big Bear Middle School and Big Bear Elementary School. Four samples were collected at each school. All the samples were non-detect.

Table 4: Unregulated Contaminants

Unregulated Contaminants	Last Sample	Range Detected		Goal (PHG or MCLG)	State MCL	Average Detected	Violation	Major Sources
		Low	High					
Unregulated Inorganic Chemicals (sampled every 3 years)								
Vanadium (ppb)	2023	ND	9.6	N/S	50	2.4	No	Erosion of natural deposits

Table 5: US EPA Unregulated Monitoring Rule (UCMR 5) (SWRCB DDW PFOA / PFOS)

Unregulated Contaminants	Last Sample	Range Detected		Notification Level ng/L or ppt	Response Level ng/L or ppt	Average Detected	Major Sources
		Low	High				
UCMR's (sampled twice in 2024) PFAS (sampled once in 2024 will be sampled quarterly in 2025)							
PFHxS (ng/L or ppt)	2024	ND	6.9	3	20	ND	Man made. Used in consumer products, fire retarding foam and other industrial processes
PFBS (ng/L or ppt)	2024	ND	7.4	500	5,000	ND	Man made. Used in consumer products, fire retarding foam and other industrial processes
PFOA (ng/L or ppt)	2024	ND	5.5	5.1	10	ND	Man made. Used in consumer products, fire retarding foam and other industrial processes

PFAS, or Per-and Polyfluoroalkyl substances, are a large group of man-made substances that are sometimes referred to as “Forever Chemicals”. PFAS are resistant to fire, water, and oil. Because of these qualities, they have historically been used in a vast array of products including non-stick cookware, food packaging, household cleaning products, makeup/cosmetics, clothing and firefighting foam. PFAS have been used in manufacturing worldwide since the 1940s, however, many PFAS chemicals have been phased out from their use in commercial products and several laws have been passed in California to ban these chemicals entirely from most products including cleaning products, firefighting foam, textiles and make-up.

While PFAS often enters the environment through industrial activities, it is essential to note that the Big Bear Valley area has historically not had heavy industry and rather is largely residential and small commercial, making Bear Valley ground water less susceptible to PFAS Contamination.

Source Water Assessment

A source water assessment (SWA) summarizes the likelihood of individual drinking water sources becoming contaminated (usually a short-term "contamination event") and serves as a foundation for public water systems to prepare source water (drinking water) protection plans and implement protection measures.

A SWA was conducted of the domestic water wells for the City of Big Bear Lake Department of Water Big Bear Lake / Moonridge system in December 2001. A copy of the complete assessment may be viewed at the Water Department's office at 41972 Garstin Drive in Big Bear Lake or at the SWRCB San Bernardino District office, 464 West 4th Street, Suite 437, San Bernardino, CA 92401. A summary of the SWA may also be requested by contacting Ben Berge, Production Supervisor, City of Big Bear Lake Department of Water, P.O. Box 1929, Big Bear Lake, CA 92315, or call (909) 866-5050.

The City of Big Bear Lake Department of Water is located at 41972 Garstin Drive Big Bear Lake, CA 92315 and is open Monday through Friday from 8:00 a.m. until 4:30 p.m.

DWP’s Board of Commissioners meets on the fourth Tuesday of every month at 9:00 a.m. at the Garstin operations facility. The public is welcome to participate in these meetings. DWP’s phone number is (909) 866-5050. For questions regarding your water quality, ask for Jason Hall, or contact The Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.